

**THE SECONDARY TRANSFER EFFECT OF INTERGROUP CONTACT:  
ATTITUDE AND EMPATHY GENERALISATION AMONGST WHITE SOUTH  
AFRICAN STUDENTS AT STELLENBOSCH UNIVERSITY**

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## **DECLARATION**

By submitting this thesis, I declare that the entirety of the work contained therein is my own original work, that I am the authorship owner thereof (unless to the extent explicitly otherwise stated), that reproduction and publication thereof by Stellenbosch University will not infringe any third party rights and that I have not previously in its entirety or in part submitted it for obtaining any qualification.

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## ABSTRACT

Intergroup contact is established as a powerful strategy for reducing intergroup prejudice. Many advances have been made towards understanding the mechanisms involved in contact's prejudice-reducing effect, not least the emergence of cross-group friendships as an important dimension of contact and affective variables as mediators of intergroup contact effects (Hewstone & Swart, 2011). The present cross-sectional study undertaken amongst white South African students at Stellenbosch University (N = 866), further substantiates the recently advanced notion of the *secondary transfer effect* of intergroup contact (Lolliot et al., 2013; Pettigrew, 2009), whereby engaging in positive intergroup contact with one outgroup predicts not only positive primary outgroup attitudes, but also generalises towards secondary outgroups uninvolved in the contact situation. Using latent variable structural equation modelling, the present study examined the extent to which the secondary transfer effect of intergroup contact occurs towards both black (African) South Africans (primary outgroup) and coloured South Africans (secondary outgroup) via the mediating mechanisms of attitude and empathy generalisation. Results revealed that cross-group friendships with black (African) South Africans positively and significantly predicted improved attitudes towards coloured South Africans in general, after controlling for prior contact with coloured South Africans (i.e., the secondary transfer effect). These findings were replicated in a secondary outgroup model, in which cross-group friendships with coloured South Africans positively and significantly predicted improved attitudes towards black (African) South Africans in general, after controlling for prior contact with black (African) South Africans. Moreover, the present study found significant evidence for the operation of the secondary transfer effect via affective empathy generalising from the primary outgroup to the secondary outgroup. Cross-group friendships with black (African) South Africans predicted greater perspective-taking towards this primary outgroup, which, in turn, predicted greater affective empathy towards coloured South Africans, as well as a reduction in social distance towards this secondary outgroup. This effect was not observed in the secondary outgroup model. The present study further demonstrates the centrality of attitude generalisation as a powerful mechanism underlying the secondary transfer effect, and provides important avenues for future research regarding empathy generalisation. The present findings moreover offer practical means for shaping intergroup contact interventions aimed at reducing prejudice and promoting intergroup harmony in South Africa.

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## OPSOMMING

Intergroepkontak is gevestig as 'n kragtige strategie om intergroep vooroordeel te verminder. Daar is al baie vooruitgang gemaak met die verstaan van die onderliggende meganismes van die kontak-vooroordeel verhouding veral die rol van kruisgroepvriendskappe as 'n belangrike dimensie van kontak asook affektiewe veranderlikes as bemiddelaars van intergroepkontak effekte (Hewstone & Swart, 2011). Die huidige deursneestudie, wat onderneem is onder wit Suid-Afrikaanse studente by Universiteit Stellenbosch (N = 866), bevestig die idee van die *sekondêre oordrageffek* van intergroepkontak (Lolliot et al., 2013; Pettigrew, 2009), wat inhou dat deelname in positiewe intergroepkontak met een uitgroep nie slegs positiewe effekte het op houdings teenoor die primêre uitgroep nie, maar ook veralgemeen na sekondêre uitgroepe wat nie by die kontaksituasie betrokke was nie. Met die gebruik van latente veranderlike strukturele vergelykingsmodellering, het die huidige studie die mate waartoe die sekondêre oordrageffek van intergroepkontak voorkom tussen swart (Afrikaan) Suid-Afrikaners (primêre uit-groep) en bruin/kleurling Suid-Afrikaners (sekondêre uit-groep), via die bemiddelingsmeganisme van houding- en empatieveralgemening, bestudeer. Die resultate het getoon dat kruisgroepvriendskappe met swart (Afrikaan) Suid-Afrikaners verbeterde houdings teenoor bruin/kleurling Suid-Afrikaners oor die algemeen beduidend positief voorspel het, nadat daar gekontroleer is vir vorige kontak met bruin/kleurling Suid-Afrikaners (met ander woorde die sekondêre oordrageffek). Hierdie bevindinge is herhaal in die sekondêre uitgroepmodel, waar kruisgroepvriendskappe met bruin/kleurling Suid-Afrikaners verbeterde houdings teenoor swart (Afrikaan) Suid-Afrikaners oor die algemeen beduidend positief voorspel het, nadat daar gekontroleer is vir vorige kontak met swart (Afrikaan) Suid-Afrikaners. Daarbenewens het die studie beduidende aanduidings getoon dat die sekondêre oordrageffek deur die affektiewe empatieveralgemening van die primêre uitgroep na die sekondêre uitgroep werk. Kruisgroepvriendskappe met swart (Afrikaan) Suid-Afrikaners het groter perspektiefneming teenoor hierdie primêre uitgroep voorspel, wat weer groter affektiewe empatie teenoor bruin/kleurling Suid-Afrikaners voorspel het, tesame met 'n vermindering van die sosiale afstand van hierdie sekondêre uitgroep. Hierdie effek is nie in die sekondêre uitgroepmodel gevind nie. Hierdie studie demonstreer die belang van houdingveralgemening as 'n kragtige meganisme wat die sekondêre oordrageffek onderlê en bied belangrike weë vir verdere navorsing oor empatieveralgemening. Verder bied dit praktiese maniere waarop intergroepkontak-intervensies ingerig kan word ten einde vooroordeel te verminder en intergroeppharmonie te bevorder in Suid-Afrika.

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## **CHAPTER ONE**

### **AN INTRODUCTION TO INTERGROUP CONTACT IN SOUTH AFRICA**

Few societies in the late twentieth century have remained as consistently in the public eye as South Africa (Lemon, 1987; Worden, 2011). Essentially, this is because the issues that have been raised by apartheid remain foremost among the shared concerns of the world's nations (Lemon, 1987). With South Africa's political history tracing more than three centuries of ethnic oppression, culminating in a forty-year period of legislated prejudice and discrimination, it becomes evident why remnants of the apartheid era still linger in the lives of many South Africans.

The abolishment of the apartheid regime in 1994 fashioned promises of desegregation, and created expectations amongst South Africans of better intergroup contact, which would ultimately improve inter-ethnic relations (Bornman, 2011; Openshaw, 2015). However, evidence suggests that post-apartheid South Africa remains largely characterised by informal segregation (Alexander & Tredoux, 2010) where people of different ethnicities still cluster together in ethnically homogeneous groups in communities and schools (Dixon, Tredoux, Durrheim, Finchilescu, & Clack, 2008). As such, the need to promote positive intergroup relations, cooperation, trust, and forgiveness between the ethnic groups of South Africa, remains an ever pressing matter. Indeed, as Gibson and Claasen (2010) state, "there can be little doubt that the future of South Africa's nascent democracy depends upon the development of cooperative rather than conflictual intergroup relations" (p. 255).

This chapter begins with an introduction to apartheid in South Africa. This is followed by a discussion of contemporary, post-apartheid intergroup relations in South Africa, after which a brief introduction to the Contact Hypothesis is given. The chapter concludes with an overview of the present research as well as a review of the various chapters that comprise this thesis.

#### **The Introduction of Apartheid in South Africa**

The history of intergroup relations in South Africa has borne witness to large amounts of hostility amongst its people. Some of the earliest accounts of intergroup separation occurred in the seventeenth century, which saw the arrival of the first white settlers in South Africa (Lemon, 1987). The Dutch East India Company (also referred to as 'Vereenigde Oostindische Compagnie' or VOC) established the first permanent settlement in South

Africa, introducing both Dutch and British traditions and values (Lemon, 1987). The VOC encouraged the immigration of other European groups, including Germans, French Huguenots, as well as slaves from Madagascar, Mozambique, and Eastern countries (Lemon, 1987). From the onset, the European colonies regarded themselves as superior and made deliberate attempts to limit contact with indigenous populations (Khoikhoi and San inhabitants). As Hulme (1984) notes, “their attitude was simply that of masters of ‘inferior beings’” (p. 224). This antagonism became further apparent in 1663 when the first schools were built for the indigenous populations only, and again in 1678 when the Dutch colonies disbarred the black populations and forbade them from living in the same vicinity as them (Louw, 1984). It was also during this time, that a constitution was drawn up, in which the supremacy of white over black South Africans, as well as the master-slave model was established (Thompson, 2006). This further contributed to the ethnic tension and divide that characterised the peopling of South Africa at the time.

In the early 1800’s, the British colonised South Africa alongside the black (African), coloured and white Afrikaans-speaking groups. Between 1860 and 1866 over 6000 Indians arrived, mostly low-caste Hindus drawn from areas of poverty and unemployment (Lemon, 1987). The Indians were soon contracted by the British as workers in the sugar plantations of Kwazulu-Natal; work which, subsequent to the establishment of the Natal Act No. 14 (1859), continued on for another five years with the option of either expanding for another five years or making a private arrangement with an employer (Lemon, 1987). The Indians were the final element of South Africa’s multi-ethnic society to enter the country, though their permanence remained questionable by the whites (Lemon, 1987). Prohibition of further immigration and strict controls on movement were imposed to contain the rapid numerical expansion that had been taking place (Thompson, 2006).

As the British colonists settled into the interior, they brought with them their rejection of social levelling, their exclusion of slaves from their church and family, as well as the paternalistic ideology to defend these endeavours (Giliomee & Mbengu, 2007). It was also largely the church that kept the Afrikaans-speaking whites (also known as ‘Boere’/Afrikaners) together as a community whilst preserving their mother tongue and imbuing in them, a sense of allegiance to the country that had become their only home (Giliomee & Mbengu, 2007). Paradoxically, although the British were more innocuous towards the non-white population, and their laws and administration provided social and political reform for non-Europeans (for example, by abolishing the slave trade in 1838; Lemon, 1987), ultimately, they were not that different from Afrikaners in terms of their

basic attitudes toward non-Europeans (Hulme, 1984; Welsh & Spence, 2007). Before long, the newly established white Afrikaans-speaking Union Parliament started implementing segregationist legislation, which in due course formed the basis of the apartheid regime.

Apartheid became formally instituted in 1948 under the National Party and the leadership of prime minister Daniel Francois (D.F.) Malan (Beck, 2000). Under this regime, the amount and nature of contact that white South Africans had with black (African), coloured, and Indian South Africans, became severely restricted in order to keep the various ethnic group separated from one another. The chief motivation behind this drastic segregation was the fear of miscegenation (interbreeding between people considered to be of different ethnicities) amongst South Africans and the ensuing loss of the Afrikaner identity (Lemon, 1987). Whereas Gordon Allport (1954) in the United States was beginning to argue that increased intergroup contact would reduce conflict between white Americans and African-Americans, the National Party of South Africa invoked the argument that apartheid was required because of the paternalistic notion that inter-ethnic contact caused inter-ethnic friction (Welsh & Spence, 2011).

### **Intergroup Relations during Apartheid (1948 – 1994)**

Over the next forty years, various strategies were employed to evade intergroup contact between people of different ethnicities. Of the regulations that were passed, the most noteworthy was the Population Registration Act of 1950, as it served as the framework for all the other laws. The Act enforced the classification of all South Africans into four distinct ethnic categories, namely white, coloured, Indian and black (African), that would ultimately determine their status in society (Welsh & Spence, 2011). Apartheid depended on keeping ethnic differences in sharp focus; and the Population Registration Act was one of the principal instruments for achieving this goal (Welsh & Spence, 2011). Another major instrument was the Group Areas Act of 1950. This Act involved the segregation of the four ethnic groups into homogenous residential areas, ensuring distance from one another and positioned as far as possible from white residential areas (Beck, 2000; Maylem, 1990).

The Pass Laws (1952) ensured the freedom of movement in white demarcated areas for white South Africans, but not for black (African) South Africans, who were not granted any free movement and were required to carry an identification document at all times. The passing of the Natives Resettlement Act of 1954 empowered the government to demarcate new townships (or “locations”) for Africans beyond the perimeters of white residential areas (Johns, Karris, & Gerhart, 2013). According to the apartheid 'ideal' these townships were to

be positioned as far as possible from white residential areas; designed in such a way that they could be cordoned off in the event of riot or rebellion (Maylem, 1990). The Reservation of Separate Amenities Act of 1953 imposed further social division, requiring separate entrances to public buildings, ethnic separation on public transport, as well as separate sports grounds, benches and other public amenities (Welsh & Spence, 2011).

These and other laws effectively criminalized contact between people of different ethnicities, and strained existing relationships between individuals from different ethnic groups. They left in place the myriad rules concerning passes and permits required by urban Africans, thereby renewing white control (Johns et al., 2013). Moreover, the development of intimate relationships, such as marriage and sexual relations between people of different ethnicities were lawfully banned by the Prohibition of Marriages Act of 1949/1968 as well as the Immorality Act of 1950/1957. This led to marriages, families, and friendships deteriorating as result of the restraint imposed by these Acts. Relationships and family ties across ethnic borders became impossible to maintain, since any contact between different groups were either against the law, or socially inappropriate. The segregation strategies that were initially devised as a means of negating intergroup conflict, led instead, to increased intergroup conflict and the diminishing of intergroup relations.

The enforcement of segregation continued into the education system. The scope and quality of African education before 1953 left much to be desired, mostly because of inadequate funding (Welsh & Spence, 2011). However, upon the entrenchment of the Bantu Education Act (1953) and the Extension of University Education Act (1959), African education became tied to an ideology that was premised on inequality (Welsh & Spence 2011). White and non-white learners were no longer allowed to attend the same schools and universities. Many opportunities for tertiary education, particularly esteemed universities, were provided for white South Africans (e.g., Stellenbosch University), whilst such opportunities were negligible for non-white South Africans (e.g., University of Zululand). The education system, therefore, became another instrument in the new dispensation, where ethnic discrimination and inequality in favour of the white minority, became the legalised.

Together with the Pass laws, education was the most inflammable issue affecting Africans at the time (Welsh & Spence, 2011). However, another telling indicator of injustice toward Africans during these years is evidenced by the economy and the various labour laws that were passed. Ad hoc legislation, denial of access to apprenticeships, and restrictions imposed on the acquisition of skills, combined to ensure that it was difficult for Africans to break out of unskilled categories of work (Welsh & Spence, 2011). Through the

entrenchment of the Native Workers Building Act (1951) and the Native Labour Act (1953), lower-status employment opportunities (e.g., labourers, domestic workers) were assigned to non-white South Africans, while white-collar employment was legally 'reserved' for white South Africans. Trade unions for non-white South Africans, though not illegal, were not statutorily affirmed, and their right to strike was prohibited (Welsh & Spence, 2011). White workers, on the other hand, firmly established their unions.

The enforcement of all the legislation that South Africans were subjected to, aimed to reduce intergroup contact and conflict between white and non-white groups. The repercussions, however, had far less to do with eliminating inter-ethnic friction than with reinforcing inequality and ethnic division. Indeed, this can be evidenced through the various uprisings against Apartheid and the white South African government. Tensions increased between the African National Congress (ANC) and its Africanist elements, producing the 1959 split when a detached group formed the Pan-Africanist Congress (PAC; Marais, 1998). It was the PAC that organized the anti-pass law campaign during which police shot and killed sixty-nine demonstrators, infamously known as the 'Sharpeville Massacre' of 1960. The state used the opportunity to declare South Africa as being in a state of emergency, and banned both the ANC and PAC in April of 1960 (Marais, 1998).

Meanwhile, South Africa's economy performed strongly, with GDP rising at an average rate of nearly 6 per cent between the years 1960 and 1969 (also known as the 'boom' years; Marais, 1998). This trend continued until the early 1970s, creating a large influx of foreign investment and an increased demand for skilled labourers. However, by mid-1976, before the Soweto uprising, the country had reached a debt crisis (cumulative from a series of economic shocks), which required an emergency loan from the International Monetary Fund (IMF; Marais, 1998). Despite high growth rates experienced in the 1960s, non-white unemployment rates in the 1970s became terminally high (Marais, 1998), leading to Africans (and many coloureds and Indians) struggling to survive. The country was once again, in the midst of radical oppression against non-whites alongside political unrest.

On 16 June 1976, when a small detachment of police officers, feeling menaced by an approaching group of 6,000 Soweto protesters, failed to separate the crowd and opened fire. Whilst fifteen fatalities were recorded by the end of the day, the uprising continued across many parts of the country, often resulting in many fatalities. Between June 1976 and 28 February 1977, 575 deaths were recorded countrywide, though this figure was speculated to be largely undercounted and could have been up to double (Welsh & Spence, 2011). Not only was the Soweto uprising by far the most serious clash between the state and protesters yet, it



was also a critical turning point in the resurrection of black opposition, signalling the subsequent the decline of apartheid (Welsh & Spence, 2011). Intergroup violence continued until 1990, when negotiations began taking place between the National Party and the ANC to put an end to the legalised segregation. 1990 also saw the release of Nelson Mandela, and in 1994 South Africa's first democratic election was held, marking the beginning of Democracy.

It has been over two decades now that South Africans of all ethnicities have been living under the new dispensation, where multiculturalism is encouraged and diversity is celebrated. Boasting eleven official languages, South Africa is home to nearly 52 million citizens from diverse cultural, ethnic, and religious backgrounds (Statistics South Africa, 2011); aptly showcasing its distinguished status as the 'rainbow nation'. Ever since the abolition of apartheid, it is evident that South Africa has progressed tremendously toward embracing democracy. The promise of unity, peace and reconciliation accompanying this transformation, is duly acknowledged in the Constitution of the Republic of South Africa (1996). However, no matter how charismatic the 'new' South Africa has become, the reality cannot be ignored: Apartheid left a baneful legacy with which post-1994 government has had to cope (Welsh & Spence, 2011). Indeed, with continued distrust and self-segregation still apparent (Gibson, 2004), the South African post-apartheid context offers a critical test for the value of intergroup contact in post-conflict societies (Hewstone et al., 2014).

### **Historical Trends in South African Social Attitudes**

South African society offers one of the most profound examples of negative intergroup relations in recent history (Stevens, Swart, & Franchi, 2006). Wilson and Thompson (1985) define the central theme in South African history as the interaction of groups and individuals of diverse origins, languages, social and cultural systems, ideologies and technologies on South African soil. It leaves little wonder why most social analysts describe South African society as deeply segmented on the basis of factors such as ethnicity, culture, class, historical background, language and religion (Horowitz, 1991; Human Sciences Research Council (HSRC), 1987). This pre-occupation with ethnic divisions can be perceived throughout the historical development of intergroup relations in South Africa, as well as in research within the social sciences (Bornman, 2011).

A substantive body of research acquired during apartheid indeed points to inter-ethnic tension (Bornman, 2011). Pioneering work in the study of ethnic attitudes was done by MacCrone (1930, 1932, 1937, 1949), who monitored white South African university students' attitudes toward blacks at two-year intervals from 1934 to 1944. In MacCrone's

(1930) first study, 25 senior white South African students were simply asked to describe their attitudes towards black South Africans. Afrikaans-speaking white South Africans were found to be the most prejudiced. Their attitude scores also had the lowest variability and showed little evidence of change in follow-up studies from 1934 to 1944. In addition, the English-speaking white and Jewish South African students were less prejudiced, the variability was higher and they showed evidence of a decrease in prejudice in follow-up studies. The trends identified by MacCrone (1949) were confirmed by the later studies of Edelstein (1972), Kuper (1965), and Van den Berghe (1962), the series of studies reported by Plug and Nieuwoudt (1983), as well as the HSRC (1987). Afrikaans-speaking white South Africans were most prejudiced against the black, coloured, and Indian South Africans, with white English-speaking South Africans expressing slightly less prejudice.

The advent of a new political dispensation in 1994 was accompanied with hopes that increased intergroup contact would result in improved inter-ethnic relations. Many countries in the Western world (including the United States and Europe) witnessed a trend (in the second half of the 20th century), which was for an increasing rejection of overt prejudice and discrimination (Finchilescu & Tredoux, 2010). Unfortunately, no such trend was evident in South Africa (see Chisholm, & Nkomo, 2005; Finchilescu & Tredoux, 2010). Indeed, Pettigrew (1993) suggested that “there is a 20- to 30-year lag in much of South African history compared to that of the American South” (p. 163). With the birth of democracy, the political transformation of South Africa has faded the historic status relations between the groups and has moreover brought South Africans together in ways that were previously unimaginable (Durrheim et al., 2011; Finchilescu & Tredoux, 2010). Interrogating how this has affected intergroup relations and attitudes leads to the question: have prejudice and negative attitudes to other groups decreased or changed in nature?

Bornman (2011) investigated intergroup attitudes after 1994. Three nationwide surveys were conducted in 1998, 2001 and 2009 using representative samples of all major ethnic groups (i.e., white, black, coloured, Indian). Results showed that, overall, attitudes were more positive among more affluent and urban communities. However, Bornman (2011) found indications of prevailing negative intergroup relations, specifically between black South Africans and Afrikaans-speaking white South Africans. While the attitudes of the Afrikaans-speaking white South Africans seem to have become more positive, this was not evident, at least to the same extent for black South Africans. The latter also appeared to be less positive towards English-speaking white South Africans than during apartheid (Bornman, 2011). Further, Gibson and Claassen (2010) trace changes in intergroup attitudes

in a slightly later period, on the basis of surveys conducted in 2001 and 2004. Gibson and Claassen (2010) move away from evaluations of ethnic prejudice and focus on attitudes around reconciliation and tolerance. One finding of their study is that black South Africans have become less reconciled to white South Africans over time, whereas white, coloured, and Indian South Africans have become more reconciled to black South Africans.

More recently, the Institute for Justice and Reconciliation (IJR) undertook a national survey amongst four representative probability samples, each representing one of the four main South African population groups. Results showed, firstly, that 76.40% of South Africans agree that apartheid was a crime against humanity, and that the apartheid state wrongly oppressed the majority of South Africans (72.10%; IJR, 2013). Secondly, the IJR (2013) reports that the majority of South Africans (61.90%) believe that there has been progress toward reconciliation since 1994, while 64.00% wish to move forward from apartheid. Similarly, majority of South Africans (55.00%) desire a united South Africa and 53.60% believe that this is achievable (IJR, 2013). Whilst South Africans in general find it challenging to understand the customs and values of other ethnic groups (42.10%), a significant minority demonstrate a willingness and desire to do so (38.90%; IJR, 2013).

On the back of these findings, it seems possible that desegregation and reintegration can be achieved. However, after more than two decades of democracy, and in spite of increased opportunities for intergroup contact in the new South Africa, South Africans have remained largely segregated (see Chisholm, & Nkomo, 2005; Dixon et al., 2008). Indeed, as part of their national survey, the IJR (2013) asked respondents to give an approximation (more / same amount / or less) of their desired interaction with South Africans of different ethnicities. Majority of respondents (50.50%) responded by stipulating that they wish to remain the same in terms of their interaction with other ethnic groups, while smaller proportions of respondents wish to have either less (21.00%) or more (19.40%) interaction with other ethnicities (IJR, 2013).

Of the four ethnic groups (black, white, Indian/Asian, and coloured), black (African) respondents expressed the greatest desire to decrease their interactions with other ethnicities (24.60%), while white respondents showed the least interest in increasing their interaction with people of other ethnicities (11.70%; IJR, 2013). Of particular relevance to the present study, a significant proportion of white respondents (69.40%; IJR, 2013) expressed that they wished to keep their amount of interaction with other South Africans the same, indicating what may be an overarching resistance to change in ethnic attitudes amongst many white South Africans today.

Given the history of intergroup relations and the central role of ethnicity as an organising principle of society, it is no wonder that social research in South Africa, specifically research within the discipline of Social Psychology, has been dominated by issues related to intergroup relations (Louw & Foster, 1991). The findings related to the social and political climate show that many South Africans still hold deep-seated prejudicial attitudes towards other ethnic groups; dispositions that are almost certainly reminiscent of the apartheid state. The South African context is thus a vital setting for future research aimed at understanding intergroup relations, not least because positive, high-quality intergroup contact experiences (e.g., cross-group friendships) remain rare in spite of South Africa's overall diversity (Hewstone et al., 2014). If positive intergroup contact experiences are less common than expected, it becomes imperative that when such contacts do occur, they have the broadest possible impact on group-based prejudice (Hewstone et al., 2014).

### **The Contact Hypothesis**

The most widely acclaimed thesis documenting the influence of contact on intergroup prejudice is Allport's (1954) Contact Hypothesis. Since its inception more than 60 years ago (see Hewstone & Swart, 2011), the Contact Hypothesis, which proposed that positive intergroup contact has the potential to reduce intergroup prejudice and to improve intergroup decisions, has received overwhelming empirical support (Hewstone & Swart, 2011; Pettigrew & Tropp, 2006; Swart, Hewstone, Christ, & Voci, 2011). It suggests that even deep-seated antipathies toward another group may be improved by regular positive interactions with members of that group (Allport, 1954; Dixon, Durrheim, & Tredoux, 2007). Indeed, Allport's (1954) formulation continues to receive support across a variety of situations, groups, and societies, both for its rare theoretical status as well as its policy importance (Pettigrew, 1971, cited in Pettigrew, 1998).

Allport's (1954) vision of intergroup contact was based on bringing members of different groups together in *face-to-face encounters* (direct contact), thereby reducing intergroup prejudice (Hewstone & Swart, 2011). Most notably, he proposed that direct intergroup contact would be more likely to reduce prejudice if it involved certain prerequisite features, namely equal status among the individuals in the contact situation, cooperation between groups, working toward common goals, as well as legitimate institutional support (Dovidio, Gaertner, & Kawakami, 2003; Hewstone & Swart, 2011). Moreover, the underlying causal assumption of this Hypothesis, that greater intergroup contact leads to reduced prejudice, as opposed to lower prejudice leading to greater intergroup contact, has

received strong empirical support from the emerging longitudinal contact literature (e.g. Binder et al., 2009; Swart et al., 2011). Notwithstanding the robust evidence for the positive effect of direct intergroup contact, it has one significant limitation in that it only applies when group members have the opportunity for face-to-face contact (Hewstone et al., 2014).

In an attempt to overcome this practical obstacle to achieving direct intergroup contact, recent evidence has emerged to suggest that positive intergroup contact remains effective even in less direct forms of contact (see Dovidio, Eller, & Hewstone, 2011). Extended contact (Turner, Hewstone, Voci, & Vonofakou, 2008; Wright, Aron, McLaughlin-Volpe, & Ropp, 1997) is one such form of indirect contact, and refers to the individual's knowledge of an ingroup member's direct contact with an outgroup member (Hewstone et al., 2014). Of particular relevance to the present study, recent evidence has emerged to suggest that positive attitudes held towards a primary outgroup (i.e., an outgroup that has been directly encountered in the original contact situation) generalise towards a secondary outgroup (i.e., also results in positive attitudes towards an outgroup that was not involved in the original contact situation, or an outgroup that has never or rarely been previously encountered; Lolliot et al., 2013; Pettigrew, 2009; Pettigrew & Tropp, 2006). This is arguably the most powerful manner in which contact effects are able to aid in the facilitation of creating a harmonious society, because direct face-to-face contact with different outgroups is not always possible. This effect is known as the *secondary transfer effect* (STE) of intergroup contact.

### **The Present Study**

Drawing on the significance of South Africa's long history of intergroup conflict and ethnic oppression, the present study sought to investigate the effect of intergroup contact on outgroup prejudice towards multiple outgroups. Notably, of all the changes South Africa has witnessed since the abolishment of the apartheid state, the one that is shown to have the greatest impact on intergroup relations is the increased possibility of intergroup contact (Dovidio et al., 2003; Finchilescu & Tredoux, 2010). As such, contact with members of an outgroup (i.e., a group that you do not directly identify with; e.g., Allport, 1954) forms an essential tool for improving intergroup attitudes and for creating a harmonious post-Apartheid South Africa.

Given the importance of South African universities in facilitating positive intergroup contact, the present study explored the extent to which positive intergroup contact between ethnically diverse students studying at Stellenbosch University (total student population in

2015 of 30,150; Stellenbosch University, 2015) improved attitudes, and lessened prejudice. More specifically, the present cross-sectional study investigated the extent to which positive intergroup contact (specifically cross-group friendships) with black (African) South African students at Stellenbosch University could improve attitudes towards black (African) South Africans in general, amongst white South African students. The secondary transfer effect was investigated by exploring whether these positive contact effects would generalise to include more positive attitudes towards coloured South Africans in general (after controlling for prior contact with coloured South Africans). The secondary transfer effect was further explored by testing whether cross-group friendship with coloured South Africans would predict more positive attitudes towards black (African) South Africans (after controlling for prior contact with black (African) South Africans in general).

Furthermore, the present study aimed to expand on the relatively sparse repertoire of STE studies. To achieve this, the present study sought to investigate some of the underlying mechanisms involved in this effect in order to understand *how* this process occurs. Two affective mechanisms underlying the STE, namely attitude generalisation and empathy generalisation, were investigated. The attitude generalisation hypothesis predicts that the STE occurs via the generalisation of positive attitudes from the primary outgroup to positive attitudes towards the secondary outgroup, thereby stimulating more positive attitudes towards the secondary outgroup. Similarly, the empathy generalisation hypothesis predicts that the STE occurs via the generalisation of empathy from the primary outgroup towards greater empathy for the secondary outgroup. To date, very little research has been conducted to uncover the mechanisms through which the STE occurs (but see De Beer, 2015). The present study addressed this matter by providing evidence to support the mediation of the STE via these two forms of generalisation.

## **Chapter Overview**

Chapter one has provided a brief overview of South African intergroup relations and intergroup attitudes, both during and after apartheid. It has also provided a brief overview of the research comprising this thesis, and has introduced the theoretical framework within which the present study was undertaken.

Chapter two provides a detailed overview of the development of Allport's (1954) Contact Hypothesis including early support for the theory and its associated positive outcomes. This section will also include a brief outline of those factors that enhance or impede the positive effects of contact (i.e., moderators of contact) as well as its generalising

potential beyond the outgroup exemplar. Emphasis will then be given to those underlying mechanisms that have been shown to mediate the relationship between contact and its positive outcomes (i.e., mediators of contact), with a special focus on empathetic responding. Finally, the various dimensions (direct and extended) of intergroup contact that have been shown to reduce prejudice will also be highlighted, with specific emphasis given to the importance of cross-group friendships.

Expanding on the contact literature, chapter three will provide an in-depth discussion on one of contact's most recent advances, namely the secondary transfer effect (STE). This chapter considers some of the earliest support for the STE, along with a discussion on variables that influence this effect, namely perceived similarity between outgroups and differential status amongst the outgroups. This will be followed by a detailed discussion of the potential mediating mechanisms of the STE, specifically attitude generalisation and empathy generalisation to conclude the chapter.

Drawing on the literature discussed in previous chapters, chapter four provides an overview of the present study. It includes a discussion of the rationale, aims and objectives, hypotheses and methods associated with the present study. The chapter concludes with a report of the results that were obtained in the present study.

Chapter five concludes this thesis with a discussion of the results of the present study. In particular, this chapter places the practical and theoretical contributions made by the present study within the context of the existing body of intergroup contact literature. It concludes with an overview of the limitations of the present study, and offers directions for future research.



## CHAPTER TWO

### THE CONTACT HYPOTHESIS

South Africa is respected as an example of an inspiring transition from the oppression of apartheid to the freedom that is democracy. Having moved from a noncontact society characterised by inter-ethnic conflict and segregation (Foster & Finchilescu, 1986), to one where all South Africans are able to freely interact with one another, South Africa has become one the world's foremost nations in social reconciliation (Foster & Finchilescu, 1986; Moodley & Adam, 2000). Since the beginning of democracy, South Africa has witnessed many positive changes in its progress towards intergroup harmony, chief among them being the increased possibility of intergroup contact (Dovidio et al., 2003; Finchilescu & Tredoux, 2010). Indeed, there is little question regarding the importance of positive intergroup contact for improving intergroup relations in post-apartheid South Africa.

The contact hypothesis has long been considered one of psychology's most effective strategies for improving intergroup relations (Dovidio et al., 2003). For the past sixty years Allport's (1954, 1958) thesis on intergroup relations has provided a popular strategy for reducing intergroup conflict (Amir, 1969; Pettigrew, 1998; Pettigrew & Tropp, 2000). The contact hypothesis has remained of considerable interest to scholars in various disciplines including sociology (e.g., Fitzpatrick & Hwang, 1992; Ford, 1986; Martinovic, van Tubergen, & Maas, 2009) and social psychology (e.g., Islam & Hewstone, 1993; Pettigrew & Tropp, 2011; Van Laar, Levin, Sinclair, & Sidanius, 2005). Indeed, it has received welcome not only in universities, but likewise in public schools, churches, in progressive industries and government bodies, as well as in international bodies (Allport, 1954). It is therefore little wonder that the contact hypothesis has become a firmly-established account, and is perhaps now more adequately termed intergroup contact *theory* (Hewstone, 2009; Hewstone & Swart, 2011; Schmid, Hewstone, Küpper, Zick, & Wagner 2012), especially given its broad coverage of different types of contact (for a detailed review see Brown & Hewstone, 2005).

The prejudice-reducing effect of contact continues to receive extensive support in meta-analytic reviews of both general intergroup contact (Pettigrew & Tropp, 2006), and cross-group friendships specifically (Davies, Tropp, Aron, Pettigrew, & Wright, 2011; Hodson, Hewstone, & Swart, 2013). Moreover, these effects typically generalise beyond the immediate contact situation, to other situations, and even to other outgroups not involved in the contact situation (i.e., secondary transfer effect of contact; Pettigrew, 2009). Notably,



according to Pettigrew, Tropp, Wagner and Christ (2011), they also appear to be universal – across nations, genders, and age groups (see also Pettigrew & Tropp, 2006).

Beyond ethnic borders, the efficacy of intergroup contact in reducing group-based prejudice and conflict has been demonstrated across a variety of situations and contexts (see Pettigrew et al., 2011). Within the broad contact repertoire, studies have shown that positive intergroup contact reduces intergroup conflict towards a range of groups that are often subject to stigmatisation, some of which have included the elderly (e.g., Bousfield & Hutchinson, 2010), homosexuals (e.g., Collier, Bos, & Sandfordt, 2013; Vonofakou, Hewstone, & Voci, 2007), the homeless (e.g., Lee, Farrell, & Link, 2004; Lee, Tyler, & Wright, 2010), immigrants (e.g., Ceobanu & Escandell, 2010; Voci & Hewstone, 2003), people with HIV/AIDS (e.g., Herek & Capitanio, 1997; Yiu, Mak, Ho, & Chui, 2010), the physically disabled (e.g., Krahé & Altwasser, 2006), and the mentally disabled (e.g., Alexander & Link, 2003). In addition, intergroup contact has produced a variety of other positive outcomes, such as greater outgroup trust and forgiveness for past transgressions (e.g., Voci, Hewstone, Swart, & Veneziani, 2015).

While the contact literature is expansive, it has arguably only been studied in relatively benign settings (Hewstone et al., 2014). Research undertaken by Hewstone and colleagues (2014) in countries either still experiencing, or having just emerged from periods of pervasive intergroup animosity (e.g., Northern Ireland, Cyprus and Bosnia), has shown that contact between groups in (post-) conflict societies are also associated with reduced prejudice (see also Hewstone, Cairns, Voci, Hamberger, & Niens, 2006; Tam et al., 2007, 2008). This is certainly a promising indication for the relevance of contact theory in post-apartheid South Africa, as well as for the need to foster the building of mutual forgiveness and trust between communities (Tam et al., 2008). Indeed, not only is intergroup contact of special theoretical importance, but it also has critical implications for many practical and applied issues, not least of which include affirmative action, immigration, neighbourhood and school desegregation, and other major social policies that necessarily entail widespread intergroup contact (Pettigrew & Tropp, 2011).

This chapter provides a broad overview of the contact literature, showcasing the importance of positive (high-quality) intergroup contact in a multi-ethnic society such as South Africa. The chapter begins with a brief history of the contact hypothesis, followed by a few of the most recent advances in contact theory. These advances include an overview of the positive outcomes associated with intergroup contact, as well as mention of those factors that have been shown to influence the strength of contact's effects (i.e., moderators of the contact-

prejudice relationship). The practical relevance of contact's prejudice-reducing effects is also briefly outlined, showcasing its potential to generalise beyond the outgroup exemplar that is encountered. Thereafter, special attention is paid to those factors that explain *how* contact reduces prejudice (i.e., mediators of the contact-prejudice relationship) before concluding the chapter with a discussion on the importance of cross-group friendships as a potent dimension of intergroup contact.

## **Development of the Contact Hypothesis**

### **A Brief History of the Contact Hypothesis**

The study of intergroup relations is a critical topic for humanity. Broadly, it seeks to understand the causes of conflict and hostility between groups, and how this can be transformed into cooperation and social harmony (Hogg & Abrams, 2001). Early on in the twentieth century, social psychologists vested considerable interest into gaining knowledge on intergroup relations – an interest that was largely the result of the inter-ethnic conflict that had been occurring in the United States during the early 1900s. Following observations of such conflict, contact became recognised as the key mechanism by which intergroup change could be achieved. The notion that positive intergroup contact could be used to promote better intergroup relations and reduce prejudice was conceptualised in 1947, when the eminent sociologist, Robin Williams, presented his initial formulation of intergroup contact theory to the Social Science Research Council, reviewing what was known about group relations at the time (Pettigrew et al., 2011).

Before long, researchers began exploring black-white contact. For example, after the desegregation of the Merchant Marine in 1948, black and white seamen on the ships and in the maritime union developed genuine bonds with one another, providing ideal grounds for contact research (Brophy, 1946; Pettigrew et al., 2011). During this time, researchers found that the more voyages (i.e., contact) white seamen embarked on with blacks, the more positive their ethnic attitudes became. By 1950, research tested the contact theory more rigorously. Major studies comparing ethnically segregated and desegregated public housing projects provided compelling evidence for the prejudice-reducing effect of contact (Pettigrew et al., 2011). Based on William's (1947) initial review, and with the strongest evidence provided by the housing projects undertaken by Deutsch and Collins (1951; see also Wilner, Walkley, & Cook, 1955; Works, 1961), Allport (1954) introduced in his pioneering thesis, *The Nature of Prejudice* – whose sixteenth chapter ('The Effect of Contact') contained the

systemisation of ideas that would guide research on intergroup relations for the next six decades (Hewstone & Swart, 2011).

Renowned for his exposition of the nature of prejudice between groups, Allport (1954) offered a work that has in recent years, advanced into a fully integrated theory (Pettigrew & Tropp, 2008). In the opening to his chapter on the effects of contact in his seminal book, Allport (1954) wrote that, “It has sometimes been held that merely by assembling people without regard for [ethnic], colour, religion, or national origin, we can thereby destroy stereotypes and develop friendly attitudes” (p. 261). His thesis not only pioneered the way forward for the improvement of intergroup relations, but moreover created a framework within which a multitude of studies have been produced. Allport (1954) premised his thesis primarily on the social and psychological foundations of human prejudice, but with an added intention of showing how knowledge on intergroup relations can be applied to the reduction of group tensions. Specifically, Allport’s (1954) contact hypothesis argues that direct, face-to-face contact with members of other groups may reduce negative and foster positive intergroup attitudes, particularly when the following conditions are met: contact between group members is cooperative, they meet under equal status conditions, there is some pursuit of common goals, and the contact is institutionally sanctioned (Schmid et al., 2012).

Early evidence emerged demonstrating that a reduction in prejudice was indeed apparent in the presence of Allport’s optimal conditions, namely when there is equal status among the respondents (e.g., Brewer & Kramer, 1985; Cohen & Lotan, 1995); when intergroup cooperation is fostered to achieve a common goal (e.g., Aronson & Patnoe, 1997; Brown & Abrams, 1986; Sherif, 1966; Worchel, Andreoli, & Folger, 1977); and when the contact is sanctioned by legitimate authorities (Landis, Hope, & Day, 1984). More recently, Pettigrew (1998) has argued that the contact situation should hold potential for the development of friendships as a fifth optimal condition, as cross-group friendships typically invoke three of the four optimal conditions initially stipulated by Allport (1954; namely equal status, common goals, and cooperation). Meta-analytic findings based on 515 studies (Pettigrew & Tropp, 2006) suggest, however, that these conditions are merely facilitating, rather than necessary. Nevertheless, it is widely agreed upon that the quality of contact, not so much the frequency thereof, is a crucial element for improving attitudes (Schmid et al., 2012). The section below will provide an overview of the body of literature showcasing support for contact’s prejudice reducing effect on intergroup relations.

### Support for the Contact Hypothesis

Research based on the contact hypothesis has yielded an impressive array of data derived from a wide range of social situations (Hewstone & Brown, 1986). Within these contact situations, the dependent variable has been defined either as prejudice, ethnocentrism, or discrimination, among others (Riordan, 1978). Some of the earliest studies on the relationship between intergroup contact and outgroup prejudice provided encouraging support for the underlying theory, indicating that intergroup contact *does* indeed reduce outgroup prejudice (e.g., Allport & Kramer, 1946; Brophy, 1946; Sims & Patrick, 1936; Singer, 1948). Studies have been conducted in the armed services (e.g., Roberts, 1953; Stouffer, Suchman, DeVinney, Star, & Williams, 1949), in educational settings (e.g., Johnson, Johnson & Maruyama, 1984; Schwarzwald & Amir, 1984) and in the workplace (e.g., Harding & Hogrefe, 1952; Minard, 1952).

One of the most notable studies in the early contact repertoire was reported by Mannheimer and Williams (1949). Data that they reported from World War II indicated that white soldiers changed their attitudes toward black soldiers markedly after the two ethnic groups had been together in combat. Whilst these and other early findings have provided encouraging support for the prejudice-reducing effect of contact, other studies have yielded largely conflicting results (for reviews see Amir, 1969, 1976; Harding, Kutner, Prohansky, & Chein, 1969; Katz, 1970; McClendon, 1974; Riordan, 1978; Simpson & Yinger, 1972).

Researchers have found negative results along such lines as increased isolation, prejudice, and hostility (e.g., Brown & Albee, 1966; Campbell, 1958, 1961; Fishman, 1961; Sherif, 1966; Webster, 1961; Willie & McCord, 1972) and loss of self-esteem for members of minority groups (e.g., Rosenberg & Simmons, 1971). Moreover, at the minimal group level, experiments in inter-ethnic interaction have revealed patterns of white dominance in problem-solving situations (e.g., Cohen, 1972; Katz & Benjamin, 1960). Notwithstanding, favourable results in the same vein have been obtained (e.g., Burnstein & McRae, 1962; Campbell, 1958; Cohen & Roper, 1972; Ford, 1973; Jeffries & Ransford, 1969; Mann, 1959; Meer & Freedman, 1966; Sherif, 1966; Yarrow, Campbell, & Yarrow, 1958). Yet, given the conflicting nature of the findings from early contact studies, some researchers reached mixed conclusions (e.g., Amir 1969; Forbes, 1997; Stephan, 1987), while others became markedly critical of the contact hypothesis (e.g., Ford, 1986; McClendon, 1974) to the point that some social psychologists have discarded contact theory altogether.

According to Pettigrew and Tropp (2006), there are three major reasons for the divergent conclusions reached by these reviews. Firstly, samples included in these reviews were often incomplete, and no attempts were made to encompass the entire research base (including a mean of less than 60 articles per review). Secondly, these reviews did not include strict inclusion criteria, often including studies with contrasting definitions of intergroup contact (e.g., using measures of intergroup proximity rather than face-to-face contact as the independent variable). Finally, none of the reviews used fully quantitative assessments of contact effects, and instead, tended to offer subjective judgements that were based on their own readings of a subset of the contact literature. Given these limitations of past reviews, criticisms of the contact hypothesis remain questionable. Pettigrew and Tropp (2006) asserted that only a meta-analytic approach would suffice to assess the overall effect between intergroup contact and prejudice on the basis of the empirical studies that constitute the research literature of the 20th century.

Answering the call, their meta-analysis of 515 studies (including 713 independent samples) was based on a total of over 250,000 respondents. In their monumental meta-analysis (see also Dovidio et al., 2003), Pettigrew and Tropp (2006) defined intergroup contact as direct, face-to-face interaction between members of distinct groups. In an attempt to overcome the methodological shortcomings of previous contact reviews, studies were included based on four strict criteria: Firstly, only those studies where intergroup contact acted as the independent variable and intergroup prejudice as the dependent variable. Secondly, they only selected studies investigating contact between distinctly separate groups. This criterion ensured the examination of intergroup outcomes of contact, rather than interpersonal outcomes. Thirdly, only those studies where the intergroup interaction was directly observed, reported by respondents, or occurred in focused, long-term situations where direct contact was unavoidable (e.g., small classrooms), were included. Finally, their meta-analysis included studies in which the prejudice scores were examined as an outcome of the individual's contact experience, rather than using collective or aggregate scores. In summary, Pettigrew and Tropp's (2006) meta-analysis comprised only of contact situations that included direct, face-to-face interactions between members of distinct groups.

Across all 515 studies, the results showed a highly significant negative relationship between contact and prejudice (mean effect size  $r = -.22$ ,  $p < .001$ ), confirming that contact is indeed an effective tool for reducing prejudice (Hewstone et al., 2014; Pettigrew & Tropp, 2006). Moreover, it was found that the effect of contact was greater in samples where the contact setting was structured to meet Allport's (1954) four optimal contact conditions

(mean  $r = -.29$ ,  $p < .001$ ; Pettigrew & Tropp, 2006). However, they also reported a significant negative relationship between intergroup contact and prejudice in the absence of these conditions (mean  $r = -.20$ ,  $p < .001$ ), revealing that these conditions are not essential for intergroup contact to achieve positive outcomes, as researchers have often assumed in the past (Pettigrew & Tropp, 2006). As such, Pettigrew (2008) suggested that these conditions should be seen as facilitating rather than essential for the positive effects of intergroup contact (see also Hewstone et al., 2014).

Furthermore, with the inclusion of such a large sample in their meta-analysis, Pettigrew and Tropp (2006) revealed a remarkable universality of intergroup effects (Pettigrew et al., 2011). Notably, the mean correlations between contact and prejudice for respondents of varying ages were all significant, ranging from  $r = -.20$  to  $r = -.24$ . Similarly, the inverse contact-prejudice relationship was observed amongst males (mean  $r = -.19$ ) and for females (mean  $r = -.21$ ). Moreover, Pettigrew and Tropp (2006) found virtually no difference in effect sizes between U.S. (mean  $r = -.22$ ,  $p < .001$ ) and non-U.S. samples (mean  $r = -.22$ ,  $p < .001$ ), suggesting a global indicator of contact effects (see also Pettigrew et al., 2011). Indeed, Pettigrew and Tropp's (2006) meta-analysis has shown, beyond any doubt, that intergroup contact reduces intergroup prejudice. Or, put simply, "contact works" (Hewstone et al., 2014, p. 40).

This prejudice-reducing effect of contact has moreover been demonstrated in a small, but accruing number of South African contact studies. For example, Holtman, Louw, Tredoux, and Carney (2005) investigated the attitudes of 1,119 learners in eighteen desegregated schools and found contact (particularly outside of school) with individuals of other ethnic groups to be a strong predictor of positive attitudes towards these groups. Similarly, Finchilescu, Tredoux, Muianga, Mynhardt, and Pillay (2006) investigated the attitudes of 2,559 students across four South African universities, and found a strong negative relationship (ranging from  $r = -.23$  to  $r = -.56$ ) between contact and prejudice in all subsamples, once again demonstrating the positive effects of intergroup contact. In addition, Moholola and Finchilescu (2006) found that black (African) South African learners who attended multi-ethnic schools were significantly less prejudiced towards white South Africans than were black (African) South African learners attending an all-black school, where contact with white South Africans was limited. Taken together, these findings add to the significance of intergroup contact as a facilitator for lessened prejudice and improved attitudes towards outgroup members in post-apartheid South Africa.



Notwithstanding such findings, certain limitations are worth mentioning. Each of these South African studies, along with the majority of the studies (70%) in Pettigrew and Tropp's (2006) meta-analysis, were cross-sectional in design, rather than experimental or longitudinal. Importantly, as Hewstone et al. (2014) ascertain, cross-sectional studies limit one's ability to draw conclusions about the direction of causal effects, as they do not (a) allow for time to elapse between the supposed cause and effect and/or (b) manipulate the hypothesized causal variable and investigate its effect on an outcome variable(s). Nevertheless, several impressive longitudinal (e.g., Al Ramiah & Hewstone, 2012; Binder et al., 2009; Christ & Wagner, 2013; Eller & Abrams, 2004; Levin, Van Laar, & Sidanius, 2003; Swart et al., 2011) and experimental (e.g., Blascovich, Mendes, Hunter, Lickel, & Kowai-Bell, 2001; Husnu & Crisp, 2010; Mazziotta, Mummendey, & Wright, 2011) studies have recently emerged, confirming the causal pathway from contact to reduced prejudice, thereby enhancing confidence in the value of contact as a social intervention.

### **Positive Outcomes of Intergroup Contact**

Since Allport's (1954) initial formulation of the Contact Hypothesis, there is now extensive evidence that positive interactions between members of different groups can reduce intergroup prejudice and hostility (Allport, 1954; Brown & Hewstone, 2005; Pettigrew & Tropp, 2006). This body of research has clarified and expanded upon many aspects of the original hypothesis, providing evidence for the optimal conditions of contact (although not their necessity), and demonstrating its effects on multiple outcome measures, and for multiple target outgroups. For example, researchers have convincingly demonstrated that contact can reduce both blatant (e.g., Hewstone et al., 2006; Voci et al., 2015) and subtle forms of intergroup bias, such as implicit prejudice (e.g., Vezzali & Giovannini, 2012) and inhumanisation (i.e., the tacitly held belief that one's ingroup is more human than an outgroup; e.g., Brown, Eller, Leeds, & Stace, 2007).

Many dependent variables beyond prejudice are also related to intergroup contact (Pettigrew et al., 2011). Reductions in intergroup anxiety and threat have remained prominent themes in the contact literature, and are considered essential by the world's leading contact researchers. For instance, various types of contact have exerted beneficial effects on intergroup attitudes (and a variety of other outcome measures) through reducing intergroup anxiety, reducing perceptions of threat, and reducing concerns with rejection (e.g., Hodson, Harry, & Mitchell, 2009). Other outcomes include enhanced empathy and perspective-taking (e.g., De Beer, 2015; Swart et al., 2011), outgroup knowledge (Pettigrew, 1998), job

attainment and satisfaction (Pettigrew & Tropp, 2011), and perceptions of outgroup variability (Voci & Hewstone, 2003). Note that all of these are positive outcomes associated with intergroup contact. These positive effects emerged not only for ethnic target groups for whom the original theory was devised, but also for other, often stigmatised groups – such as homosexuals (e.g., Collier et al., 2013; Vonofakou et al., 2007), the disabled (e.g., Krahé & Altwasser, 2006), and the mentally ill (e.g., Alexander & Link, 2003).

Furthermore, great advances have been made towards understanding how intergroup contact operates on multiple levels, promoting prejudice reduction by simultaneously reducing negative affect (e.g., intergroup anxiety; see Paolini, Hewstone, Cairns, & Voci, 2004; Pettigrew & Tropp, 2008; Turner, Hewstone, & Voci, 2007) and increasing positive affect (e.g., empathy; see Harwood, Hewstone, Paolini, & Voci, 2005; Pettigrew & Tropp, 2008; Turner et al., 2007a). It should be noted, however, that contact does not simply eliminate negative states and perceptions, but rather *augments* positive emotions and encourages respondents to reach out to others (Hodson et al., 2013). Accordingly, intergroup contact lowers prejudice through various affective and cognitive mechanisms, while also encouraging positive behaviours towards the outgroup, increasing knowledge of the outgroup, promoting positive norms in a contact situation, and heightening trust in the outgroup (Hodson et al., 2013). In addition, several studies have reported that contact is positively related to intergroup trust and forgiveness (e.g., Noor, Branscombe, & Hewstone, 2015; Tam et al., 2008), and that it has an impact via many of the factors identified before, such as reduced anger and inhumanisation (Hewstone et al., 2006; Tam et al., 2007).

Consider, too, research conducted in countries either still experiencing, or having just emerged from periods of pervasive intergroup animosity (e.g., Northern Ireland, Cyprus and Bosnia), has shown that contact between groups in (post-) conflict societies are also associated with reduced prejudice (see also Tam et al., 2007, 2008). Hewstone and colleagues (2006) found that intergroup friendship in Northern Ireland between Catholics and Protestants engendered forgiveness and trust of the other religious group. Interestingly, this dramatic effect was especially strong among those Catholics and Protestants who had suffered personally from the province's sectarian violence, which is different from what one might expect. Even the social sciences other than social psychology have uncovered a variety of contact effects. For instance, in the political realm, Mutz (2002) has demonstrated with both national survey data and experiments that contact with those individuals who harbour dissonant political opinions, fosters greater political tolerance. It is noteworthy that this work



has greatly enhanced our understanding of the intergroup contact process by expanding the range of contact's effects across both cognitive and affective domains (Pettigrew et al., 2011).

There is no doubt that positive contact is associated with reduced prejudice (Pettigrew & Tropp, 2006). As noted, researchers have demonstrated the wealth of positive impacts that contact can have. However, some critics of intergroup contact theory seem to mistakenly believe that intergroup contact theory simply predicts positive outcomes under all conditions (Hewstone et al., 2014). Granted, Pettigrew and Tropp (2006) found that positive outcomes of contact were *greater* in situations that met Allport's conditions than those situations that did not (Hewstone et al., 2014). Nevertheless, as Pettigrew and Tropp (2006) demonstrated, significant positive (but diminished) outcomes exist even when these conditions are not met. It seems fitting, then, that these optimal conditions for contact are best conceptualised as moderators of contact effects, rather than as entirely separate factors (see also, Harwood, Hewstone, Amichai-Hamburger, & Tausch, 2013). While extensive study has been made of these optimal conditions under which intergroup contact positively influences intergroup attitudes, very little attention has been paid to its potential negative consequences.

Recent research (e.g., Paolini, Harwood, & Rubin, 2010; Schmid, Tausch, Hewstone, Hughes, & Cairns, 2008) has shown that diverse or mixed settings (e.g., South Africa) typically expose people to greater frequency of negative as well as positive contact. Arguably, the risk is that such mixed settings may increase prejudice because the negative contact undermines the positive effects of contact (Hewstone et al., 2014). Accordingly, a number of critics have drawn attention to this significant caveat in contact research. These researchers have highlighted the field's widespread bias towards the positive effects of contact (see Barlow et al., 2012; Pettigrew, 2008), with Pettigrew & Tropp's (2006) meta-analysis of 515 studies finding only 4% to have reported negative outcomes (and 2% showing no effect). However, the role of negative intergroup contact may not be as crucial as some critics have anticipated.

According to Pettigrew et al. (2011), those who have lots of intergroup contact tend to report both positive and negative contact, and these respondents tend to reveal less prejudice comparable to those who report only positive contact (Pettigrew & Tropp, 2011). Additionally, surveys with probability samples demonstrate that respondents report far more positive than negative intergroup contacts (Pettigrew & Tropp, 2011). This may seem surprising, but this finding helps to explain why contact leading to increased prejudice is so relatively rare in the research literature (Pettigrew et al., 2011). Finally, it is worth noting that the effects of negative intergroup contact have been shown to be moderated by whether the

participant has entered the contact voluntarily (i.e., voluntary contact; Pettigrew & Tropp, 2011). When this is the case, the effects of negative contact are far smaller than when the contact involves involuntary contact (Pettigrew & Tropp, 2011). This speaks to the importance of those factors that seem to influence the *strength* of contact's effect on intergroup prejudice (i.e., moderators of contact effects), a discussion to which I now turn.

### **Moderators of Contact Effects**

Beyond merely demonstrating that contact works (Hewstone & Swart, 2011) contact researchers have made great advances toward understanding the underlying mechanisms that influence the strength of contact effects (i.e., the factors that moderate contact effects). We have seen how Allport's (1954) optimal conditions specify when intergroup contact is likely to have its most positive effects. His situational specifications all moderate the contact and prejudice relationship. Moreover, historical accounts of 'the prejudiced person' characterised such individuals as intolerant toward multiple outgroups (Allport, 1954). It is therefore little wonder that in his initial formulation, Allport (1954) acknowledged his concern that individuals' initial level of prejudice could be a potential barrier to prejudice reduction. Notwithstanding, contact research has shown to be effective amongst highly prejudiced persons who would not, under normal circumstances, freely engage in intergroup contact (e.g., Hodson, 2011; Pettigrew & Tropp, 2008). Later research has uncovered additional moderators. Below, I highlight two variables that have consistently been shown to moderate contact effects, namely the salience of group membership and differential group status.

#### **Salience of group membership.**

Hewstone and Brown (1986) maintain that intergroup contact with an outgroup exemplar is most likely to result in reduced prejudice towards the outgroup as a whole when the outgroup exemplar that is encountered by the ingroup member is perceived as being a sufficiently typical representative of the outgroup. Put differently, contact works best (and often only) when group membership salience is relatively high (i.e., when one's interaction partner is psychologically construed as a member of the outgroup and not merely an individual; Hodson et al., 2013).

The moderation effect of category salience has been replicated in numerous studies. Brown, Vivian, and Hewstone (1999), for example, conducted a test of the moderation hypothesis in a European context. Amongst respondents reporting that nationalities were highly salient in their relationship with a member of the outgroup, there was a reliable

relationship between contact and (positive) outgroup attitude; by contrast, there was not a reliable relationship for the ‘low’ salience respondents. As predicted, the salience variable proved to be a significant moderator ( $p < .01$ ). In addition, both experimental (e.g., Van Oudenhoven, Groenewoud, & Hewstone, 1996; Wilder, 1984) and correlational studies (e.g., Voci & Hewstone, 2003) now provide extensive support for the moderation of contact effects via intergroup salience (see Brown & Hewstone, 2005 for a review).

The advantage of making group memberships salient is that it favours generalisation of positive attitudes from a specific outgroup member to the outgroup as a whole (Brown & Hewstone, 2005; Vezzali, Hewstone, Capozza, Giovannini, & Wölfer, 2014). However, a word of caution is worth mentioning here: heightened membership salience may have the undesired effect of reinforcing negative stereotypes and perceptions about the outgroup, leading to increased intergroup anxiety, which may in turn, impede positive attitude generalisation to the outgroup as a whole (Greenland & Brown, 1999; Islam & Hewstone, 1993; Lolliot et al., 2015). Notwithstanding, when group membership is sufficiently evident and prominent, but not to the point where group membership is seen as stereotypical, membership salience remains an important moderator for positive effects to spread from one’s interaction partner to the whole outgroup (Hodson et al., 2013). As elaborated below, contact effects are also moderated by group status, working best among members of the dominant majority group rather than the disadvantaged group (Hodson et al., 2013; Tropp & Pettigrew, 2005b).

### **Differential group status.**

From the early days of contact research, theorists recognised the importance of group status, suggesting that intergroup contact should ideally be founded on a relatively equal status basis (e.g., Allport, 1954). However, this is rarely achievable in reality (Cook, 1979; Stephan, 2008). Recently, the focus on group status has largely concerned the differential strength of contact effects as a function of group status: belonging to the dominant and advantaged group (majority) or the disadvantaged group (minority; Hodson et al., 2013). This classification is especially evident in post-apartheid South Africa, where minority and majority status group members have different historical backgrounds and experiences in society. For example, according to Swart et al. (2011), the apartheid ethnic categories, namely, white, Black (African), coloured (of mixed ethnic heritage), and Indian (of Asian descent), and their ethnic-related issues continue to persist in post-apartheid South Africa (see also Pillay & Collings, 2004). In addition, despite the fact that the political power has shifted

from white to Black (African) South Africans in post-apartheid South Africa, white South Africans continue to enjoy a socioeconomic advantage over both Black (African) and coloured South Africans (Swart et al., 2011).

Using data from a larger meta-analytic study of the effects of intergroup contact, Tropp and Pettigrew (2005b) examined the differences in contact-prejudice relationships amongst members of minority and majority status groups. They found the contact-prejudice link to be significantly weaker for members of disadvantaged groups ( $r = .18, p < .01$ ) than for members of dominant groups ( $r = .23, p < .01$ ; Tropp & Pettigrew, 2005b; see also Pettigrew & Tropp, 2011). While Binder et al. (2009) reported non-significant effects for minority groups, Swart, Hewstone, Christ and Voci (2010; see also Swart et al., 2011) provided robust evidence that contact is indeed able to reduce prejudice amongst both minority and majority status groups.

Furthermore, Dixon et al. (2010) revealed interesting findings: amongst the minority group, contact was shown to improve attitudes toward the majority group, but paradoxically made the minority group less likely to enact social change (see also Devine & Vasquez, 1998; Hyers & Swim, 1998). To explain the nature of such findings, Tropp and Pettigrew (2005b) suggest that members of minority and majority status groups both have challenges with which they must contend as they approach cross-group interactions; however, these challenges tend to be based in largely distinct concerns. Specifically, majority status group members are typically concerned with being perceived as prejudiced by individuals lower in status, whereas members of minority status groups are concerned with becoming the target of prejudice from individuals higher in status (see Plant, 2004; Plant & Devine, 2003; Shelton, 2003; Stephan & Stephan, 1985; Vorauer, Main, & O'Connell, 1998). To this end, Tropp (2006) adds that members of majority status groups are generally less inclined to think of themselves in terms of their group membership, while members of minority status groups are often acutely aware of their group's devalued status. Nevertheless, as Hewstone et al. (2014) assert, contact works for minority and majority group members alike. Therefore, these moderation effects qualify the extent of the contact effect, not its existence.

There is a general consensus that intergroup contact often leads to improved attitudes among the individuals (Pettigrew & Tropp, 2006), but the critical question is whether these altered attitudes generalise beyond the immediate situation to new situations, to the entire outgroup, or even to outgroups not involved in the contact (Pettigrew, 1997, 1998). Such generalisation is crucial to the useful application of the contact hypothesis. If the positive effects of contact are limited to the particular situation or the outgroup exemplar, the practical

value of the theory is clearly restricted (Pettigrew et al., 2011). The section below will address the practical relevance of contact by giving an overview of the generalised effects of intergroup contact. These effects are especially important since direct, face-to-face contact is not always possible.

### **Generalised Effects of Intergroup Contact**

Contact research now has substantial evidence that contact benefits intergroup relations, with considerable inroads made towards understanding its facilitating conditions, and even more as to when contact is most likely to work (Hodson et al., 2013). However, one of the earliest questions that faced social psychologists interested in intergroup contact was that if contact theory is to have wider consequences its effects need to generalise (Lolliot et al., 2013). Specifically, if these prejudice-reducing effects were unable to generalise beyond the immediate contact situation or beyond the outgroup exemplar being encountered, intergroup contact would be of little value as a means of improving broad spectrum intergroup relations. As such, researchers quickly sought to understand whether intergroup contact effects generalise beyond the outgroup exemplar to the entire outgroups involved, across situations, and even to outgroups uninvolved in the original contact situation (Pettigrew et al., 2011). Notably, Pettigrew (1998) identified three types of generalisation, namely (a) from an outgroup individual to the outgroup as a whole, (b) from the contact group to an uninvolved group, and (c) across situations.

In terms of the first kind of generalisation, Davies and colleagues (2011) focused largely on generalisation from one's contact partner to the outgroup as a collective. They found compelling evidence that intimacy plays a key role in these scenarios, as we come to like the outgroup through a myriad of processes, including, for example, warmth and connectedness (Davies et al., 2011). Lolliot et al. (2013), by contrast, explored the type of generalisation whereby contact with one group generalises to positive attitudes toward an uninvolved outgroup. The latter generalisation effect is also referred to as contact's secondary transfer effect (STE; Lolliot et al., 2013; Pettigrew, 1997, 2009), and is of particular relevance to the present study (see chapter three for a detailed overview). In addition, Nesdale and Todd (1998, 2000) found evidence for contact's effects of prejudice across situations. Most notably, Pettigrew and Tropp (2006) found evidence supporting all three types of generalisation. Specifically, they found significant generalisation effects across situations (mean  $r = -.24$ ,  $p < .001$ ; see also Christ et al., 2014; Gaither & Sommers, 2013), from one outgroup member to the outgroup as a whole (mean  $r = -.21$ ,  $p < .001$ ; see also Brown &

Hewstone, 2005), as well as from one outgroup to other uninvolved outgroups (mean  $r = -.19$ ,  $p < .001$ ; Lolliot et al., 2013; Pettigrew, 2009; Tausch et al., 2010).

The authority of these findings leave little doubt that contact with an outgroup representative leads to a range of positive intergroup outcomes (Hodson et al., 2013; see also Pettigrew & Tropp, 2011). As such, considerable comfort can be drawn from the fact that the generalised effects of intergroup contact are reliable (see Pettigrew & Tropp, 2006), thus providing even greater support for the contact hypothesis. This section has attempted to establish the significance of intergroup contact as a facilitator for lessened prejudice and improved attitudes, and that these effects have been shown to generalise well beyond the outgroup encountered in the original contact setting. I turn now to an overview of the dimensions of contact, emphasising the importance of cross-group friendships, before concluding with the mediating processes underlying the contact-prejudice relationship.

### **Dimensions of Direct Contact**

At this point there is little remaining doubt that intergroup contact has wide-ranging positive effects (Hodson et al., 2013). Research has demonstrated that people can benefit from intergroup contact without having experienced it themselves, where, simply by knowing that an ingroup member has an outgroup friend, prejudice can be reduced (i.e., extended contact hypothesis; Wright et al., 1997). However, according to the contact hypothesis, face-to-face contact between groups, especially if characterised by optimal conditions (i.e., equal status, cooperation, the pursuit of superordinate goals, and institutional support), can bring about even more positive intergroup relations (Vezzali et al., 2014). Even opportunities for contact are sometimes considered as an approximation of face-to-face intergroup contact (e.g., Prestwich, Kenworthy, Wilson, & Kwan-Tat, 2008), but it cannot be assumed that because ingroup and outgroup members are in close proximity to one another that they are interacting with each other (Lolliot et al., 2015). Hence, for the purposes of the present study, investigating the contact-prejudice relationship will include a measure of *direct contact* between ingroup and outgroup members. Below, I highlight the various dimensions of direct intergroup contact, placing special emphasis on the quality of intergroup contact and the importance of cross-group friendships.

### **General Intergroup Contact Quantity and Contact Quality**

Actual or direct contact between group members has been the historical and empirical focus of contact researchers, and for good reason. After all, the ultimate question, concerns



whether contact with members of other groups reduces prejudice (Hodson et al., 2013). The central theme of intergroup approaches to bias reduction has been the need to increase the quantity and quality of intergroup contact (Hewstone, Rubin, & Willis, 2002; Voci & Hewstone, 2003). Traditionally, researchers have measured contact in terms of quantity (i.e., frequency with which someone has direct intergroup encounters; Lolliot et al., 2015). Indeed, Allport's (1954) original formulation underscores the frequency of interactions for the reduction of outgroup prejudice. However, the 'optimal' conditions emphasised in his thesis shed light on the importance of *high-quality* intergroup interactions. These facilitating conditions (equal status, cooperation towards a common goal, institutional support, and acquaintance potential) have been referred to as the 'quality' of contact (see Tausch, Kenworthy, & Hewstone, 2005, for a review), suggesting that contact quantity alone, in the absence of quality, would be insufficient for effectively reducing prejudice.

Islam and Hewstone (1993) undertook one of the earliest studies to explore the differential impact of self-reported contact quantity and contact quality on outgroup prejudice. The study utilised Hindu (N = 65) and Muslim (N = 66) students attending a Bangladesh university. Hindu respondents were asked about their intergroup encounters with Muslims, and Muslim respondents were asked about their intergroup encounters with Hindus. Islam and Hewstone (1993) found that both contact quantity and contact quality were significantly associated with reduced prejudice towards the respective outgroup. Measures of contact quality, however, yielded significantly stronger results in terms of prejudice reduction ( $\beta = -.48, p < .001$ ) than contact quantity ( $\beta = -.12, p < .05$ ).

More recently, Voci and Hewstone (2003, Study 1) investigated intergroup contact with immigrants in Italy (N = 310). In their analyses, they treated contact quantity and quality as separate predictors of anxiety, perceived outgroup variability, outgroup attitudes, and subtle prejudice. Anxiety was reduced by quality of contact ( $\beta = -.37, p < .001$ ), not by contact quantity ( $\beta = -.08, ns$ ). Perceived variability was enhanced both by contact quantity ( $\beta = .15, p < .05$ ) and contact quality ( $\beta = .15, p < .05$ ). Finally, attitudes toward immigrants were only affected by contact quality ( $\beta = .33, p < .001$ ), but not by quantity of contact ( $\beta = .09, ns$ ). Once again, these findings speak to the importance of high-quality intergroup encounters, as opposed to only quantity, for the improving of intergroup relations. Ideally, a contact situation should be structured in such a way as to facilitate more frequent high-quality contact. Contemporary developments in contact literature have demonstrated that friendships between members of different groups (i.e., cross-group friendships) offer an especially important means of experiencing regular (i.e., high frequency), high-quality contact with

outgroup members. Indeed, if generic contact can reduce prejudice (e.g., Hamberger & Hewstone, 1997; Pettigrew, 1997), then it is unsurprising that having cross-group friends is particularly powerful at doing so (Pettigrew, 1998).

### **Cross-group Friendship as a Dimension of Contact**

The intimate nature of the contact between friends has largely been regarded as being higher quality contact than when it is casual, superficial or imposed (Allport, 1954; Pettigrew, 1998; Swart et al., 2010). In a pioneering article, Pettigrew (1997) described friendship as having special importance, as it involves contact over time and across situations, through which group members develop meaningful, close relationships under conditions that facilitate improved attitudes (see Allport, 1954; Davies et al., 2011). Not only do cross-group friendships typically encapsulate many of the hallmarks of positive contact (relatively equal status within the friendship, similar friendship goals, intimacy and trust; Hodson et al., 2013), they are also characterised by frequent interactions (contact quantity) that are more likely to be characterised by Allport's (1954) 'optimal' conditions (contact quality; Lolliot et al., 2015). It is therefore not surprising that cross-group friendships are associated with more positive intergroup attitudes and reduced prejudice, far more than other forms of contact (e.g., neighbours or work colleagues; see Hamberger & Hewstone, 1997; Pettigrew, 1997; Pettigrew & Tropp, 2006).

Whilst the focus on cross-group friendship as a potent dimension of intergroup contact is only quite recent (e.g., Mendoza-Denton & Page-Gould, 2008; Page-Gould, Mendoza-Denton, & Tropp, 2008; Pettigrew, 1997, 1998; Pettigrew & Tropp, 2006), the importance of creating contact that is 'intimate' or that has 'acquaintance potential' has long been recognised in contact literature (e.g., Allport, 1954; Amir, 1969). Indeed, since Pettigrew's (1998) reformulation of the original contact hypothesis, the field has become particularly drawn to the power of cross-group friendships as a powerful conduit for maximizing contact effects on attitudes (Hodson et al., 2013). Numerous studies across a variety of contexts, respondents, and targets, have reported a negative relationship between cross-group friendships and a range of measures of prejudice (e.g., Barlow, Louis, & Hewstone, 2009; Binder et al., 2009; Eller & Abrams, 2004; Feddes, Noack, & Rutland, 2009; Hodson et al., 2013; Page-Gould et al., 2008; Swart et al., 2010, 2011; Tezanos-Pinto, Bratt & Brown, 2010; Turner et al., 2008; Turner, Hewstone, Voci, Paolini, & Christ, 2007).

Of particular relevance to the present study, the positive effects of cross-group friendships have also been studied in post-conflict societies. For example, Hewstone and



colleagues (2006) found that cross-group friendships between Catholics and Protestants in Northern Ireland were associated with greater forgiveness and trust towards each other; fostering more positive outgroup attitudes. More recently, Voci and colleagues (2015) tested the impact of cross-group friendship on both intergroup forgiveness and prejudice amongst people who varied in their personal experience of conflict. As predicted, cross-group friendships had a significantly more negative impact on prejudice ( $r = -.35, p < .001$ ), and a marginally more positive impact on forgiveness ( $r = .23, p < .001$ ), than did contact in general. Such findings are particularly important for contact studies in post-apartheid South Africa (see chapter one): Hewstone et al. (2014) maintain that despite South Africa's overall 'superdiversity' (see Vertovec, 2007), positive, high-quality intergroup contact experiences (e.g., cross-group friendships) remain rare (while self-segregation persists; Gibson, 2004).

Notwithstanding, South African studies have shown that when cross-group friendships do occur, they become important predictors of decreased prejudice (Swart et al., 2010). For example, in their first study, Swart et al. (2010) found that cross-group friendships with black (African) South Africans amongst both white and coloured high school students, were significantly positively associated with positive attitudes towards black (African) South Africans ( $b = .30, p < .05$  white sample;  $b = .25, p < .01$ , coloured sample). In their second study, Swart et al. (2010) reported similar findings, namely that cross-group friendships with coloured South Africans amongst white South African respondents were significantly positively associated with more positive attitudes towards white ( $b = .23, p < .05$ ) and coloured South Africans ( $b = .11, p < .05$ ) respectively. When it comes to non-experimental, survey data, however, longitudinal studies are better suited than cross-sectional studies for exploring questions of causality (Swart et al., 2011). Though longitudinal contact literature is sparse, it nonetheless supports the inverse contact-prejudice relationship implied by the contact hypothesis.

Levin et al. (2003), for example, examined the effects of ingroup and outgroup friendships formed during students' college years on their ethnic attitudes at the end of college. Undertaking an ambitious longitudinal study, Levin et al. (2003) collected data across five points over a 4-year period amongst white ( $N = 311$ ), Asian ( $N = 389$ ), Latino ( $N = 252$ ) and African American ( $N = 67$ ) students at the University of California at Los Angeles. Results showed that students who had more cross-group friendships during their second and third years of college showed less ingroup bias and intergroup anxiety at the end of their fourth year, even after controlling for prior attitudes, precollege friendships, and other background variables. A second longitudinal study stands out, namely that of Binder et al.

(2009). They undertook a two-wave longitudinal study (spanning approximately 6 months) amongst both minority- ( $N = 512$ ) and majority-status ( $N = 1,143$ ) secondary school children in Belgium, Germany, and England. Results indicated that both contact quantity and quality with outgroup friends helped to reduce prejudice longitudinally, although quality was the better predictor. Together, these findings provide robust evidence that cross-group friendships have a potent effect on prejudice across a variety of outgroups, and furthermore demonstrate that cross-group friendships have the potential to improve attitudes over time.

By far the strongest support for the importance of cross-group friendships as a dimension of intergroup contact comes from two outstanding meta-analyses conducted within the contact literature. The first meta-analysis, undertaken by Pettigrew and Tropp (2006), found that when looking at the 154 individual tests (61 samples) out of 2,000 in which contact was assessed using some measure of friendship, these cases yielded a significantly stronger effect size (mean  $r = -.25$ ,  $p < .05$ ) than the remaining 1,211 tests assessing all types of contact (mean  $r = -.21$ ). Davies et al. (2011), in their later meta-analysis of friendship contact, included a larger number of studies and many more longitudinal studies. Using effect size data from 208 individual samples, Davies et al. (2011) confirmed that overall, cross-group friendships appear to promote positive intergroup attitudes. As predicted, effect sizes at all levels (mean  $r = .26$  at the study level,  $.24$  at the sample level, and  $.24$  at the test level using random effects,  $p < .001$ ) were very similar to those found for cases assessing friendship in the original Pettigrew and Tropp (2006) meta-analysis (e.g., mean  $r$  of  $.25$ ,  $p < .001$ ; Davies et al., 2011).

It now seems clear that cross-group friendships are associated with more positive intergroup attitudes (Davies et al., 2011). Indeed, experimental (e.g., Aron, Melinat, Aron, Vallone, Bator, 1997), longitudinal (e.g., Binder et al., 2009; Levin et al., 2003; Swart et al., 2011) and meta-analytic (Davies et al., 2011; Pettigrew & Tropp, 2006) studies have enhanced confidence in a causal relationship whereby cross-group friendship improves attitudes (Davies et al., 2011).

This section has attempted to establish the central role occupied by cross-group friendship as a dimension of contact in the contact literature. Given its importance, cross-group friendships were included as the main predictor variable in the present study. It is not surprising that contact has proven such a consistent and effective ameliorator of negative outgroup biases. The field has gathered remarkable evidence regarding the benefits of intergroup contact for intergroup relations, and even more as to why contact works. By greatly expanding the range of contact's effects across both cognitive and affective domains,

these works have greatly developed and heightened researchers' understanding of intricate intergroup contact processes (Pettigrew et al., 2011). Drawing on Allport's (1954) original work, the following section will highlight a few of the most recent inroads that have been made towards understanding precisely how contact reduces prejudice (i.e., mediating mechanisms underlying the contact-prejudice relationship).

### **Mediators of Contact Effects**

With the prejudice-reducing effects of contact now well established, research has progressed from demonstrating *whether or not* contact reduces prejudice to understanding *how* it reduces prejudice (i.e., mediators of contact effects; Brown & Hewstone, 2005; Harwood et al., 2005; Swart et al., 2011; see Tausch & Hewstone, 2010 for a review). One of the earliest variables thought to mediate the relationship between intergroup contact and reduced prejudice, was outgroup knowledge. The original idea proposed by early theorists was that intergroup contact facilitated learning about the outgroup, and this new knowledge in turn reduced prejudice (Allport, 1954; see Pettigrew & Tropp, 2008 for meta-analytic findings). However, it is now widely acknowledged that there are more sophisticated cognitive and affective mechanisms underlying the contact-prejudice relationship. Indeed, sufficient evidence on mediators has accrued to merit a fully-fledged review (e.g., Brown & Hewstone, 2005) as well as a meta-analysis specifically of the mediators of contact (e.g., Pettigrew & Tropp, 2008).

Brown and Hewstone (2005) and Pettigrew and Tropp (2006) identified several mediating variables, the most effective being intergroup anxiety (a negative mediator of contact; see also Islam & Hewstone, 1993). Other negative mediators (i.e., that are reduced via positive intergroup contact) have included threat (e.g., Hodson et al., 2009; Dhont & Van Hiel, 2011), and cognitions of rejections (e.g., Barlow et al., 2009). Positive mediators, on the other hand (i.e., that are enhanced via positive intergroup contact) have included affective empathy (e.g., Swart et al., 2010, 2011; for a full review of the affective empathy states, see Batson & Ahmad, 2009), perspective taking (e.g., Aberson & Haag, 2007; Shih, Wang, Bucher, & Stotzer, 2009), sense of intimacy (overlap) with others (e.g., Cameron, Rutland, Brown, & Douch, 2006; Tausch & Hewstone, 2010; Turner et al., 2008), behaviour change (e.g., Eller & Abrams, 2004), ingroup and outgroup norms (e.g., Viki, Culmer, Eller, & Abrams, 2006), and outgroup trust (e.g., Moaz & McCauley, 2011; Tam et al., 2008).

To robustly answer *how* intergroup contact generally has positive effects, separate meta-analyses have been conducted on the three most-studied mediators, namely increased

knowledge, anxiety reduction and enhanced empathy (Pettigrew & Tropp, 2008). While mediational effects were significant for all three mediators, the affective variables showed significantly stronger mediational value than the cognitive variable of outgroup knowledge. These findings emphasize the relative importance of the affective processes underlying the contact-prejudice relationship (Pettigrew, 1998). Hence, for the purpose of the present study, only the role of empathy as a mediator of intergroup contact will be discussed in detail.

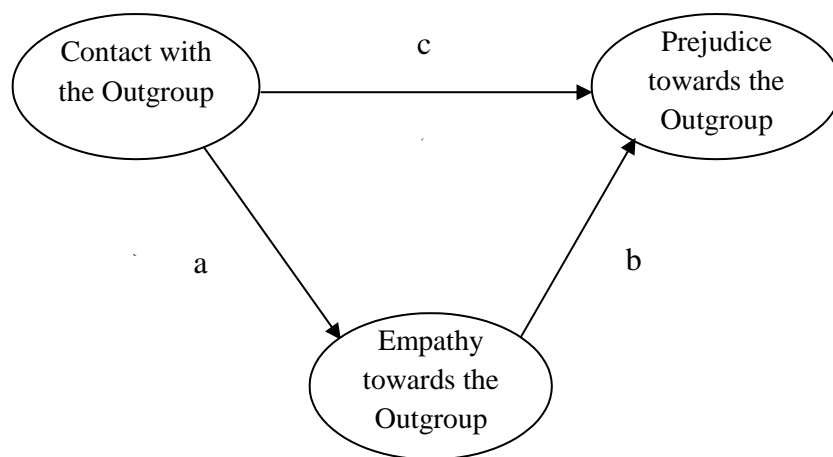
### **Empathy as a Mediator of Intergroup Contact**

Empathy refers to the ability to share and understand another person's feelings. Specifically, it is a vicarious emotional state that is aroused by observing the feelings and situations of others (Hewstone et al., 2014). There is extensive literature showing that intergroup empathy can bring about more positive relations between members of different groups, for example by reducing stereotypes, improving outgroup attitudes, and fostering greater prosocial behaviour towards the outgroup (Stephan & Finlay, 1999). According to Davis (1994) the empathetic response can be characterized along two dimensions: firstly, a cognitive dimension, which describes a person adopting another's psychological point of view by putting him/herself in another's shoes (also referred to as *perspective taking*; e.g., Galinsky & Moskowitz, 2000). Secondly, an affective dimension, which describes a person experiencing feelings of genuine concern and the understanding of another's emotional state (also referred to as *affective empathy*; e.g., Batson et al., 1997; Davis, 1994; see Batson & Ahmad, 2009 for a review).

Batson et al. (1997) proposed a three-step model depicting the relationship between affective and cognitive empathy. In this model, (1) perspective taking occurs when the ingroup member adopts the outgroup member's psychological point of view and imagines how this individual is affected by their situation (Batson et al., 1997). (2) These empathetic feelings then lead to the perception of increased concern for the individual's welfare (Batson et al., 1997). Finally, (3) the increased valuing should ultimately generalise to the group as a whole, thereby increasing positive beliefs about, feelings toward, and concern for the group as a whole (Batson et al., 1997; see Hewstone & Brown, 1986).

For the purposes of generalisation from one outgroup member to the group as a whole, empathy has the advantage of making group membership salient by reminding people of the experiences a person has as a member of an outgroup (Hewstone et al., 2014). For example, Batson et al. (1997) found that empathic feelings towards a member of a particular stigmatized group (Experiment 1: a woman with AIDS; Experiment 2: a homeless man; and

Experiment 3: a convicted murderer) improved attitudes toward the respective outgroup as a whole in all three experiments. According to this model, perspective taking precedes affective empathy, however, this temporal relationship has rarely been tested (but see De Beer, 2015). Both the affective and the cognitive empathic responses have been associated with numerous positive outcomes (e.g., Batson et al., 1997; Davis, 1994; Galinsky & Moskowitz, 2000), including an increased concern for the well-being of others (i.e., enhanced empathy; see Figure 1; path a). This, in turn, improves attitudes towards the outgroup as a whole (see Figure 1; path b; Finlay & Stephan, 2000; Galinsky & Moskowitz, 2000; Miller & Eisenberg, 1988; Stephan & Finlay, 1999). As such, the empathic response mediates the direct relationship between intergroup contact and prejudice (see Figure 1, path c).



*Figure 1.* Path model illustrating the mediating role of empathy towards the outgroup in the contact-prejudice relationship.

Comparatively little attention has been paid thus far to the mediating effect of empathy in the contact literature (Pettigrew & Tropp, 2008), but results show that intergroup contact (including cross-group friendships) is positively associated with empathy that, in turn, is negatively associated with prejudice (e.g., Aberson & Haag, 2007; Harwood et al., 2005; Pagotto, Voci, & Maculan, 2010; Tam, Hewstone, Harwood, Voci, & Kenworthy, 2006; Turner et al., 2007b). Aberson and Haag (2007) for example, showed that positive contact with African-Americans was associated with increased perspective taking amongst white undergraduate students ( $N = 53$ ), which in turn, was associated with improved attitudes and a reduction in intergroup anxiety and stereotype endorsement towards African-Americans in general. Similarly, Tam and colleagues (2006) found that increased positive contact between British university students and their grandparents was associated with increased empathy

towards their grandparents that, in turn, was associated with improved attitudes towards the elderly in general.

In the South African contact literature, Swart et al. (2010) have also provided evidence showcasing the mediational value of empathy in the contact-prejudice relationship (Study 2). Amongst the white respondents, cross-group friendships with coloured South Africans was positively and significantly associated with affective empathy towards coloured South Africans in general ( $b = .54, p < .001$ ), that, in turn, had a significant positive relationship with outgroup attitudes towards coloured South Africans in general ( $b = .26, p < .01$ ). Similar findings were revealed for the coloured South African sample. Specifically, cross-group friendships with white South Africans had a significant positive association with affective empathy ( $b = .20, p < .05$ ) towards white South Africans in general that, in turn, had a significant positive association with outgroup attitudes towards white South Africans in general ( $b = .15, p < .05$ ). Notwithstanding the validity of these findings, Swart and colleagues (2010) urge caution in drawing causal conclusions, as cross-sectional data are not sufficient for establishing causal inferences.

In light of this caveat, Swart et al. (2011) undertook an ambitious three-wave longitudinal study. They found a significant mediation effect of affective empathy of the contact-prejudice relationship amongst coloured South African high school students ( $N = 465$ ). Specifically, cross-group friendships with white South Africans at Time 1 were significantly positively associated with affective empathy towards the white South African outgroup at Time 2 ( $b = .15, p < .01$ ). This, in turn, was positively associated with improved attitudes towards white South Africans at Time 3 ( $b = .15, p < .001$ ), providing strong empirical support for the mediation effect of empathy on the relationship between intergroup contact and outgroup attitudes over time (Swart et al., 2011). More recent South African research has explored the role of intergroup contact in relations between black South Africans and African foreigners living in impoverished townships (Swart & Hewstone, 2012). Results showed that even under less than ideal settings, intergroup contact, affective empathy, and perspective-taking play an important role in reducing prejudice toward foreigners. At this point it is worth returning to Pettigrew and Tropp's (2008) meta-analysis.

Pettigrew and Tropp's (2008) meta-analytic findings provided substantial evidence that empathy/perspective-taking is a significant and consistent mediator of intergroup contact effects ( $z = -12.43, p < .0001$ ). However, given the smaller number of samples and subjects available for the analysis, Pettigrew and Tropp (2008) were only able to report on 14 samples testing the mediation of contact effects via empathy/perspective-taking. This indicates once

again that, compared to other mediators, relatively little attention has been given to the mediating effect of empathy in the contact literature (Pettigrew & Tropp, 2008). Given the sparse literature focusing on the mediating role of empathy in the contact-prejudice relationship, the present study included an investigation of the mediating role of empathy within the confines of contact's *secondary transfer effect* (described in more detail in the following chapter).

### Summary

This chapter has provided an overview of the contact literature, which has revealed that intergroup contact reliably leads to the reduction of prejudice and improved attitudes towards an outgroup, and that these contact effects are able to generalise across various target outgroups and settings (e.g., Pettigrew & Tropp, 2006), including post-conflict societies such as South Africa (Hewstone & Swart, 2011; Swart et al., 2011; see also Voci et al., 2015). Importantly, contact effects have been shown to generalise well beyond the outgroup encountered in the original contact setting. Specifically, contact with members of one outgroup have been shown to not only reduce prejudice towards that particular outgroup as a whole, but also towards other, potentially unencountered, outgroups as well (even after controlling for prior contact with members of these other outgroups; see Lolliot et al., 2013; Pettigrew, 2009; Pettigrew & Tropp, 2006). The importance of cross-group friendships for contact effects was given special recognition, specifically because it embodies some of the conditions within the contact situation that have been shown to enhance the positive effects of contact (Pettigrew, 1998). Finally, of particular relevance to the present study, the literature has shown that affective variables, for example empathy/perspective-taking, have a significantly stronger mediational value on the contact-prejudice relationship, than that of cognitive variables (e.g., Pettigrew & Tropp, 2008). In the following chapter, I focus on arguably one of the most substantial contemporary advances in contact theory, namely the secondary transfer effect of intergroup contact.



## CHAPTER THREE

### THE SECONDARY TRANSFER EFFECT

Intergroup contact has long been heralded as a means by which intergroup relations can be improved (Williams, 1947) and one that enjoys considerable support in meta-analytic reviews of both intergroup contact generally (Pettigrew & Tropp, 2006) and cross-group friendships specifically (Davies et al., 2011). A critical issue that has long concerned contact researchers, however, is whether the effects of intergroup contact generalise beyond the specific contact experience, to new situations, the entire outgroup, and other outgroups not directly involved in the contact (e.g., Amir, 1969, 1976; Ford, 1986; Hewstone & Brown, 1986; Pettigrew, 1997, 1998; Pettigrew & Tropp, 2006; Tausch et al., 2010). This speaks of contact's most important practical limitation: if the positive effects of contact with a target group do *not* generalise to other outgroups, the usefulness and practical value of contact strategies for reducing prejudice within the whole society is severely narrowed (Vezzalli & Giovannini, 2012). Encouragingly, it is now broadly recognised that the benefits of positive intergroup contact extend not only to improved attitudes towards the outgroup exemplar being encountered, but also beyond the immediate contact setting (see Pettigrew & Tropp, 2006, 2008).

A more recent type of generalisation, whereby contact reduces prejudice toward groups that are not directly involved in the contact situation (Pettigrew, 1997, 2009), is the focus of the present study. The *secondary transfer effect* (STE; Pettigrew, 2009) describes the generalisation of contact effects from an encountered primary outgroup to other secondary outgroups, that may or may not have been previously encountered (Pettigrew 1997, 2009). In other words, the STE of contact operates via the mechanism of attitude generalisation – a process whereby attitudes toward a primary outgroup affect attitudes toward a secondary outgroup (this is discussed in more detail later). Secondary transfer effects therefore hold the most far-reaching potential consequences for intergroup contact as a means for prejudice reduction (Schmid et al., 2012).

While there is some evidence for this recently designated STE in the literature (e.g., Eller & Abrams, 2004; Pettigrew, 1997, 2009; Van Laar et al., 2005; Weigert, 1976; Wilson, 1996), this type of generalisation is still rarely investigated (Tausch et al., 2010). For example, in Pettigrew and Tropp's (2006) meta-analysis, only 12 out of 515 studies tested the emergence of the secondary transfer effect, clearly demonstrating that the examination of this type of generalisation has been largely neglected in contact research.



In this chapter, I provide a broad overview of the available literature exploring the STE. I begin by reviewing early empirical evidence for the phenomenon, after which I consider cross-sectional evidence as well as more compelling longitudinal, experimental, and meta-analytic evidence exploring the operation of the STE. This is followed by a discussion of the various alternative explanations for the STE that could bring possible threats to validity to light. I then consider perceived outgroup similarity as an important moderator of the STE. The chapter concludes with a focus on the underlying mechanisms by which the STE occurs (i.e., mediators of the STE), with particular emphasis pertaining to attitude and empathy generalisation.

### **Empirical Evidence for the Secondary Transfer Effect**

The few studies that have tested for the STE have generally found consistent evidence. One of the earliest documentations of the secondary transfer effect can be traced to a study conducted in Germany in the 1970s. Weigert (1976) examined whether contact between Black and White U.S. soldiers stationed in Germany predicted black soldiers' attitudes toward German civilians. Weigert (1976) found that for black soldiers, the forming of friendships with white soldiers (primary outgroup) stationed in Germany was associated with less prejudice towards German civilians (secondary outgroup) even after controlling for demographics, ideological orientation, and, most impressively, previous contact with Germans.

Similarly, Clément, Gardner and Smythe (1977) studied the effects of an excursion to Quebec City on the intergroup attitudes of 379 English-speaking Canadian 8th graders. As expected, those English-speaking Canadian adolescents who had maximum contact with the Quebec residents, evinced significantly more positive attitudes towards French-speaking Canadians (primary outgroup). Furthermore, they also revealed significantly more positive attitudes toward the European French (secondary outgroup) with whom they had not had contact, thus meeting the full definition of the secondary transfer effect, since it is highly unlikely that the students would have had prior contact with European French.

Also consistent with an STE, Wilson (1996) found that white, non-Jewish Americans' held more positive attitudes towards black Americans (primary outgroup), whom they had contact with, which, in turn, fostered more positive attitudes towards Jewish, Latino, and Asian Americans (secondary outgroups) that were not directly involved in the contact situation. Together, these studies serve as initial evidence that the STE of contact is indeed a legitimate phenomenon.

### **More Recent Evidence for the Secondary Transfer Effect**

Pettigrew (1997) examined the STE using data from several European national probability samples ( $N = 3,806$ ). Pettigrew (1997) found that cross-group friendships with members of nationally represented minority groups, including France, Germany, Great Britain and the Netherlands (primary outgroups), predicted more favorable attitudes towards those immigrant groups, as well as towards a variety of other immigrant outgroups (secondary outgroups), even those not found in the respondent's own country (e.g., West Indians in Germany; Turks in France, among others; Pettigrew, 1997). These results were obtained while controlling for a number of relevant variables, including demographics, political attitudes and orientations, relative deprivation, and national pride. Although this work is impressive, it has been subject to criticism, firstly, because the contact measures used in Pettigrew's (1997) did not specify the precise group involved in the contact (see Hamberger & Hewstone, 1997). Secondly, his analysis did not control for the possibility that Europeans who had more contact with one outgroup might also have more contact with other outgroups (this will be discussed in more detail later; see Tausch et al., 2010).

It was not until twelve years after Pettigrew's (1997) initial study that the first formal paper studying the secondary transfer effect and its underlying mechanisms appeared (Pettigrew, 2009). In this paper, Pettigrew (2009) demonstrated the STE across two German national probability samples using a variety of outgroups, including Muslims, non-traditional women, the homeless, homosexual men and women, and Jewish people. He found that positive contact with foreigners was significantly negatively associated with prejudice towards a variety of outgroups. The generalisation of contact effects across outgroups differed according to the outgroup in question, with stronger generalisation effects exerted from the foreigners (primary outgroup) towards Muslims, the homeless, and homosexuals (secondary outgroups).

Tausch and colleagues (2010) found support for the STE in all three of their cross-sectional studies. These three studies not only showed consistent support in diverse contexts ranging from Cyprus (Study 1) to Northern Ireland (Study 2) to America (Study 3), but did so even when controlling for contact with the secondary outgroups (Study 2) and socially desirable responding (Study 3). In doing so, Tausch et al. (2010) were able to rule out two important concerns: firstly, that those respondents who have more contact with one outgroup are likely to experience more contact with other outgroups, and secondly, that the STE is a

result of people not wanting to be perceived as overtly prejudiced (these concerns will be addressed in greater detail later; see Lolliot et al., 2013).

Secondary transfer effects have also been demonstrated in longitudinal investigations, with Eller and Abrams (2004, study 1) providing the first longitudinal test of the STE. Eller and Abrams (2004) found that having more French friends improved British students' attitudes towards Algerians six months later by increasing affective ties to French people. However, due to unfortunately large attrition rates, they obtained a very small matched sample over their two waves ( $N = 34$ ) and the mediation failed to reach significance. Stronger evidence comes from a five-wave longitudinal study on the effects of having college roommates from one of four ethnic groups (Whites, African Americans, Asian Americans, and Latinos) on ethnic attitudes (Van Laar et al., 2005). They found that respondents who were randomly assigned to a room with a Latino roommate during their second and third year at university, exhibited less prejudice towards Latinos in their fourth year, as well as towards African-Americans. Students who were assigned to an African-American roommate during their second and third year, not only exhibited more positive attitudes towards African-Americans in their fourth-year, but also held more positive attitudes towards Latinos in their fourth-year.

Harwood, Paolini, Joyce, Rubin, and Arroyo (2011) provided the first experimental evidence for the STE. Using a between-subjects design and an imagined contact paradigm (see Crisp, Stathi, Turner, & Husnu, 2008), Harwood and colleagues (2011) instructed 128 American undergraduates to imagine one of three scenarios: (1) a positive or (2) negative interaction with an illegal immigrant (primary outgroup), or (3) an outdoor scene (control group). After the imagination exercise, they measured respondents' attitudes towards various outgroups. Results showed that those who imagined themselves engaging in positive intergroup contact with an illegal immigrant also showed improved attitudes towards other (secondary) outgroups (e.g., Mexican Americans, legal immigrants, Asian-Americans, the homeless, among others).

Finally, Pettigrew and Tropp's (2006) impressive meta-analysis has generated a comparatively modest, yet encouraging batch of evidence supporting the STE. Pettigrew and Tropp (2006) found 18 samples that had tested contact effects on prejudice towards outgroups not involved in the contact situation. A small, but reliable negative relationship was found between contact and reduced prejudice toward outgroups not directly involved in the contact (mean  $r = -.19$ ,  $p < .001$ ). However, two short-comings are noteworthy: firstly, of these 18 tests, 14 were taken from relatively loosely controlled studies (Pettigrew, 2009).

Secondly, in light of the former point, Pettigrew and Tropp (2006) were not able to rule out possible alternative explanations for how or why the STE occurred. Put simply, they did not outline any potential mediators of the STE beyond that of primary outgroup attitudes mediating the relationship between primary outgroup contact and secondary outgroup attitudes. Subsequent research in the field has systematically started addressing this question (e.g., Pettigrew, 2009; Tausch et al., 2010; Vezzali & Giovannini, 2012; for a review of emerging STE literature see Lolliot et al., 2013).

### **Alternative Explanations for the Secondary Transfer Effect**

I have now reviewed the basic literature on the secondary transfer effect of intergroup contact. As encouraging as these findings are, some methodological concerns remain. I now consider four of the most pertinent threats to the validity of the STE, namely secondary contact, social desirability, the causal sequence problem and shared method variance.

#### **The Secondary Contact Problem**

It could be argued that the positive association of outgroup contact with attitudes toward the secondary group is due to the fact that respondents who have more contact with one outgroup are likely to have more contact with other outgroups. To date, most studies showcasing evidence for the STE (e.g., Eller & Abrams, 2004; Pettigrew, 2009; Wilson, 1996) did not directly control for prior contact with the secondary outgroup (for exceptions see Tausch et al., 2010; Van Laar et al., 2005; Weigert, 1976). For instance, the finding by Eller and Abrams (2004) that an increase in favourability toward Algerians after contact with the French could have resulted from prior direct contact with Algerians while visiting France (see also Pettigrew, 2009). Other studies, however, essentially negate this possible source of error. Tausch and colleagues (2010) for example, directly controlled for prior contact with the secondary outgroup and still obtained strong secondary transfer effects (Studies 2-4). More specifically, in Study 2, Tausch et al. (2010) found that contact with the Catholic or Protestant (ethno-religious, primary) outgroup significantly predicted more positive attitudes towards ethnic minorities (secondary outgroup), including Asians and Africans ( $B = 2.49$ ,  $SE = 0.50$ ,  $\beta = .11$ ,  $p < .001$ ), controlling for prior contact with the ethnic minority (secondary) outgroup.

### The Social Desirability Problem

Another possible source of error concerns socially desirable responses. Perhaps, many respondents, when answering surveys about prejudice, tend to convey tolerant views towards a variety of outgroups simply because it is considered socially appropriate, or desirable to do so. This may serve as a possible explanation as to why people report both more contact and more positive outgroup attitudes than what they truly experience. Fortunately, Tausch et al. (2010, Study 3) were the first to examine this alternative account by including a measure of tendency for socially desirable responding (SDR; Paulhus, 1984), which has been demonstrated to be a valid measure of socially desirable responding (Paulhus, 1991). Their third study was conducted in an ethnically diverse area of North Texas and examined the relationship between white (non-Hispanic) and black American college students' contact with Hispanics (Tausch et al., 2010). The primary outgroup were Hispanics and the secondary outgroups were Vietnamese and Asian Indians. The results revealed that friendships with Hispanics not only improved attitudes towards Hispanics in general ( $B = 6.89$ ,  $SE = 1.65$ ,  $\beta = .27$ ,  $p < .001$ ), but these positive attitudes generalised towards the Vietnamese and Asian Indian secondary outgroups as well ( $B = 5.11$ ,  $SE = 1.55$ ,  $\beta = .21$ ,  $p < .001$ ), even with controls for both the number of close friends with the secondary outgroups, as well as socially desirable responding. These results serve as robust evidence for the STE and moreover negate the alternative explanation relating to the social desirability problem.

### The Causal Sequence Problem

One of the most fundamental questions facing contact research is that of causal order: does contact reduce prejudice, or do less prejudiced people generally seek more contact? Due to the vast majority of contact being cross-sectional in nature (particularly those testing the STE; e.g., Pettigrew, 2009; Schmid, et al., 2012; Tausch, et al., 2010, Studies 1-3), most studies cannot rule out the possibility of a selection bias, namely that prejudiced people are less likely to engage in intergroup contact (see Pettigrew, 1997, 1998, 2009). The causal sequence problem is a plaguing concern in most contact research, and can generally only be ruled out using experimental research (Finkel, 1995). Second to experimental designs, longitudinal contact research has shown that there is typically a bi-directional relationship between contact and prejudice, with the negative path from contact to prejudice being the stronger relationship (e.g., Binder et al., 2009; Pettigrew, 1997; Pettigrew & Tropp, 2006;

Swart et al., 2011). In terms of the secondary transfer effect, however, the question is: do less prejudiced people seek contact from a wider pool of outgroups?

In an attempt to address this causal sequence problem, Tausch et al. (2010, Study 4) tested a two-wave longitudinal model in which they examined both possible causal directions. Findings were consistent with a generalised contact effect in that contact with the ethno-religious (primary) outgroup significantly improved the attitudes towards this outgroup at Time 1 ( $B = .42$ ,  $SE = .05$ ,  $\beta = .11$ ,  $p = .040$ ), which in turn, was significantly associated with more positive attitudes towards ethnic minorities (secondary outgroup) at Time 2 ( $B = 1.94$ ,  $SE = .73$ ,  $\beta = .12$ ,  $p = .009$ ), even after controlling for prior contact with the secondary outgroup. Furthermore, Tausch and colleagues (2010, Study 4) tested the reverse causal order; specifically, whether positive attitudes predict an increase in intergroup contact. They found no evidence for a reverse causal order in which attitudes at Time 1 predict future contact with primary/secondary outgroups at Time 2. From this analysis, we have the first evidence showing that less prejudiced people do not necessarily seek more intergroup contact with diverse groups.

### **Shared Method Variance**

Finally, a common criticism of some prior research on the STE is that of shared method variance (see Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). STE research that makes use of similar measures to assess primary and secondary outgroup attitudes holds the risk that the observed generalisation effects may have occurred due to common method variance underlying the use of similar, or even equivalent, measurement instruments (Schmid et al., 2012). In other words, when identical measures are used to measure the same underlying construct across a variety of groups, the relationship between the variables under consideration could become artificially inflated due to the common sources of variance operating on them, making it difficult to argue for a relationship between those variables (Podsakoff et al., 2003). Schmid and colleagues (2012) aimed to eliminate the potential for shared method variance by using different outcome measures for the primary and secondary outgroups. They found that friendships with immigrants (primary outgroup) significantly reduced anti-immigrant prejudice, which directly and significantly predicted improved attitudes towards two unrelated secondary outgroups, namely homosexuals, and Jews. In a more recent study by De Beer (2015), strong evidence was found for the STE even though different measurement scales were used to measure outgroup prejudice (positive outgroup attitudes and social distance) and outgroup empathy (perspective-taking and affective

empathy) for each of the two outgroups, namely coloured (primary outgroup) and black (secondary outgroup) South Africans.

Together, these results appear to rule out the possibility that the STE is a spurious phenomenon that can be explained through alternative accounts. Thus, having established the existence of a direct relationship between primary outgroup contact and secondary outgroup attitudes, researchers have started investigating the underlying mechanism(s) whereby the STE operates. Put simply, research has started uncovering *why* or *how* the STE comes about (i.e., the mediators of the STE). I turn now to a discussion of the mediators of the STE.

### **Mediators of the Secondary Transfer Effect**

A noteworthy gap in the literature on the secondary transfer effect concerns the almost total lack of studies addressing its underlying processes (Vezzali & Giovannini, 2012), with few exceptions (see De Beer, 2015; Openshaw, 2015; Pettigrew, 2009; Tausch et al., 2010). Pettigrew (2009) investigated two of his mediational hypotheses, namely the attitude generalisation and deprovincialisation hypotheses (Pettigrew, 1997). In the next section, I will explore both of these hypotheses, providing support that has amounted for each. Pettigrew (2009) also stressed that the secondary transfer effect may largely depend on affective factors (e.g., empathy generalisation); forming Pettigrew's (1997) third hypothesised mediational process. I conclude this chapter with a discussion on intergroup empathy and its mediational value for the STE.

### **The Deprovincialisation Hypothesis**

The concept of deprovincialisation proposed by Pettigrew (1998) refers to the role of positive intergroup contact in promoting a less provincial view of ingroup practices, which, in turn, fosters more positive outgroup attitudes by providing new perspectives about both the encountered outgroup and other outgroups (Vezzali et al., 2014). The deprovincialisation hypothesis expands on the mechanism by which the cognitive mediator, outgroup knowledge, improves intergroup relations. Notably, outgroup knowledge that is gained during an intergroup encounter also implicitly encourages ingroup members to reappraise their ways of managing their social world (Lolliot et al., 2013). Put simply, deprovincialisation allows ingroup members to see that their ingroup practices, norms, and customs are not the only acceptable way to manage the social world.

To date, there has been little research on the deprovincialisation hypothesis and the results have been mixed, with some studies providing confirming evidence of its mediational



value for the STE (e.g., Pettigrew, 2009; Tausch et al., 2010, Study 1), and others not (e.g., Tausch et al., 2010, Studies 2-4). Of particular importance to the present study, Verkuyten, Thjis and Bekhuis (2010) maintain that the mediation of the STE relies, at least in part, on an affective component (ingroup feelings). Testing this idea across three studies, Verkuyten et al. (2010) found that positive contact with an ethnic outgroup (primary outgroup) led to greater multiculturalism amongst ingroup members, which, in turn, stimulated stronger distancing from the ingroup, thereby promoting improved attitudes towards the primary outgroup. Whilst these authors did not specifically test whether positive attitudes generalised to a secondary outgroup, their findings are noteworthy in that they emphasize the importance of an affective component, not merely cognitive, in the testing of mediators related to the STE. Expanding on this idea, the next section will describe the foundational mechanism by which the STE of intergroup contact is shown to operate, namely attitude generalisation.

### **The Attitude Generalisation Hypothesis**

Conceptually, attitude generalisation describes a process by which attitudes toward a particular object generalise to other, related objects (e.g., Walther, 2002). This phenomenon has been demonstrated across an array of empirical paradigms, for example, mere subliminal exposure effects (e.g., Monahan, Murphey, & Zajonc, 2000), attitude generalisation from a single group member to the outgroup as a whole (e.g., Brown & Hewstone, 2005; Hewstone & Brown, 1986), immediate implicit attitude generalisation versus gradual explicit attitude generalisation (e.g., Ranganath & Nosek, 2008), and abstract objects in a computer game (e.g., Fazio, Eiser, & Shook, 2004). Attitude generalisation is likely to be stronger if the secondary outgroup is more similar than dissimilar to the primary outgroup (e.g., Asbrock et al., 2011; Fazio, et al., 2004; Pettigrew, 2009; Schmid et al., 2012; Schmid, Hewstone, & Tausch, 2014 (Study 2); Shook, Fazio, & Eiser, 2007; Swart, 2008; Tausch et al., 2010; Walther, 2002), though, in principle, attitude generalisation is not restricted to groups that can be classified as similar (e.g., Pettigrew, 2009; Schmid et al., 2012).

In the theoretical realm of the secondary transfer effect, attitude generalisation refers to the generalisation of positive attitudes from a primary outgroup to positive attitudes towards secondary outgroups, even after controlling for prior contact with secondary outgroups (see Figure 2). This type of generalisation stretches beyond the primary transfer effect, in which contact with a single primary outgroup member stimulates improved attitudes toward the primary outgroup as whole (path a; see also Brown & Hewstone, 2005; Hewstone



& Brown, 1986), to describe a further, secondary effect where improved primary outgroup attitudes stimulates improved attitudes to other, secondary outgroups as well (path b).

In the relatively sparse literature on the secondary transfer effect, the attitude generalisation hypothesis has received the most support (Al Ramiah, 2009; Harwood et al., 2011; Lolliot, Schmid, Hewstone, Swart, & Tausch, 2011; Pettigrew, 2009; Schmid et al., 2012; Tausch et al., 2010). Moreover, attitude generalisation has also been shown to play a role in improving attitudes towards secondary outgroups when an intergroup contact scenario is simply imagined (Harwood et al., 2011), rather than based on direct, face-to-face contact. Below, I consider first cross-sectional evidence followed by more compelling longitudinal evidence for the mediation of the STE via attitude generalisation. The final part of this section will provide additional evidence for the attitude generalisation hypothesis that comes from reverse secondary transfer effect models.

Pettigrew (2009) analysed data from two German national probability samples (Sample 1: N = 2,559; Sample 2: N = 1,275). He found that attitudes towards immigrants (primary outgroup) mediated the relationship between having more immigrant friends and improved attitudes towards two other (secondary) outgroups, namely homosexuals and the homeless. Al Ramiah (2009) found similar results amongst three ethnic groups in Malaysia, namely ethnic Malays, Chinese and Indians. She found that attitudes towards the primary outgroup (ethnic Malays for Chinese respondents, and vice versa) not only mediated improved attitudes towards the respective primary outgroup, but also improved attitudes towards Indians (secondary outgroup), confirming the operation of the STE via attitude generalisation.

Tausch et al. (2010) found strong evidence for this effect in a series of three cross-sectional studies that were conducted in differing real-world settings, including America (Study 3) and two post-conflict locations, namely Cyprus (Study 1) and Northern Ireland (Study 2). Results showed that attitudes towards the primary outgroup acted as the mediator of the relationship between positive contact with the primary outgroup and reduced prejudice toward the secondary outgroup even after controlling for prior contact with the secondary outgroups and possible response bias (see also Lolliot et al., 2013; Schmid et al., 2012). Finally, the most recent cross-sectional evidence for the attitude generalisation hypothesis comes from a study amongst white South Africans (e.g., De Beer, 2015), in which cross-group friendships with coloured South Africans (primary outgroup) not only positively and significantly predicted more positive attitudes towards coloured South Africans, but also improved attitudes towards black (African) South Africans (secondary outgroup).

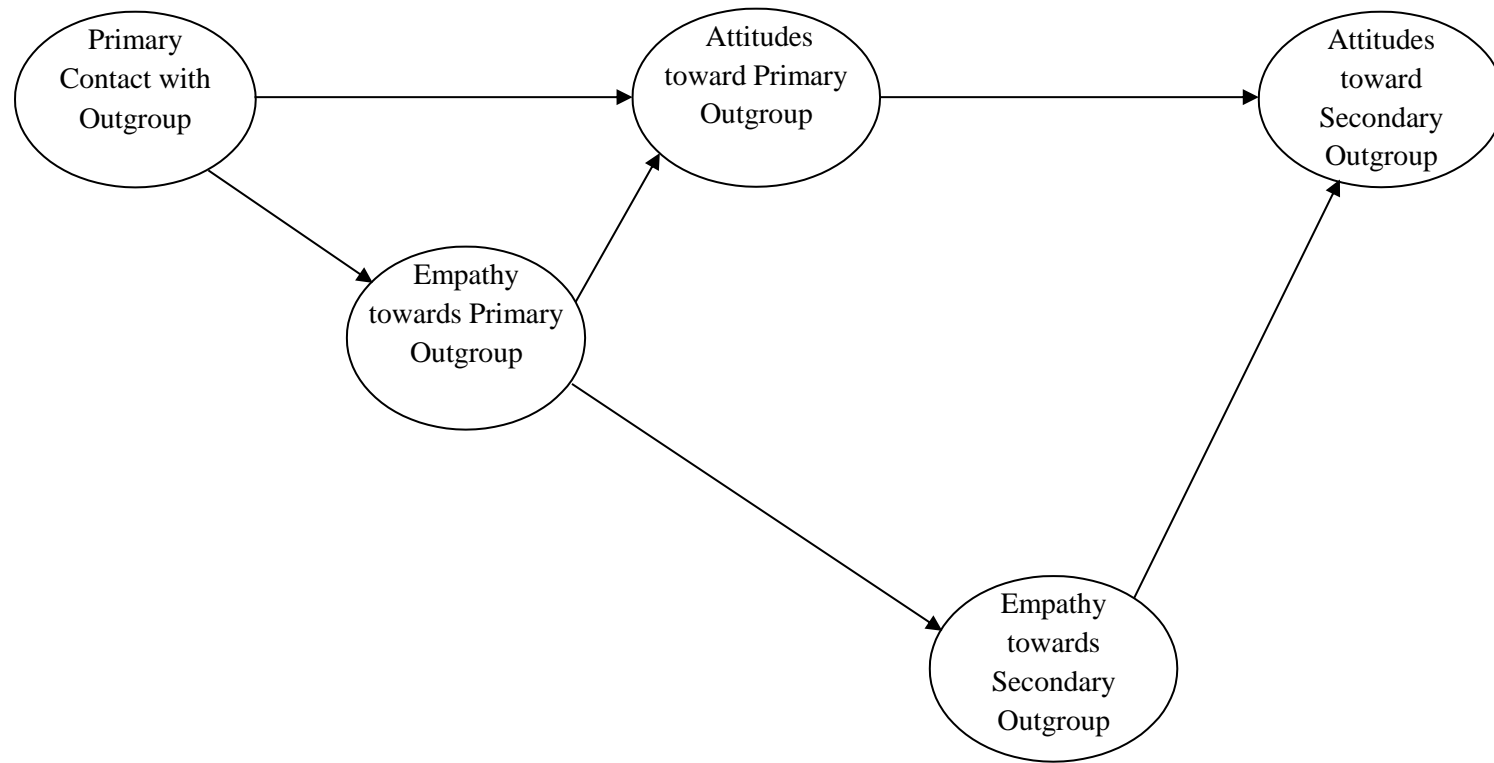


Figure 2. Structural model illustrating the secondary transfer effect via attitude generalisation and empathy generalisation.

Finally, turning now to more robust evidence for the attitude generalisation hypothesis, Eller and Abrams (2004, Study 1) employed a two-wave longitudinal study amongst British undergraduates ( $N = 34$ ), and showed that having more French friends (primary outgroup) improved British students' attitudes towards Algerians (secondary outgroup) six months later by increasing affective ties to French people. Unfortunately, however, their analyses suffered a number of flaws: they did not include any control measures, and, together with the small sample size, the mediation failed to reach significance. Tausch et al. (2010, Study 4), using a second Northern Ireland sample, did, however, test and find robust longitudinal evidence for the attitude generalisation hypothesis. They found that contact with the Protestant/Catholic (primary) outgroup at Time 1 significantly improved attitudes towards ethnic minorities (secondary outgroup) one year later at Time 2, even after previous contact with and attitudes towards ethnic minorities were controlled for.

Additional evidence for the attitude generalisation hypothesis comes from so-called *reverse* secondary transfer effects. These models test whether contact with *secondary* outgroups improves attitudes towards the *primary* outgroup, with secondary outgroup attitudes, in turn, mediating this relationship. Put simply, such models provide another test for the secondary transfer effect and the attitude generalisation hypothesis by using another (secondary) outgroup as the focal outgroup (Lolliot et al., 2013). While reverse secondary transfer effects remain a relatively new avenue through which to understand intergroup contact and all its underlying intricacies, the few studies that have included reverse models found that attitudes towards the secondary outgroup did indeed mediate the relationship between secondary outgroup contact and primary outgroup attitudes (e.g., Schmid et al., 2012, 2014; Tausch et al., 2010; Vezzali & Giovannini, 2012).

Vezzali and Giovannini (2012) for example, sought to extend their finding that contact with immigrants improved attitudes towards two secondary outgroups, namely the disabled and homosexuals, by exploring the reverse path. Specifically, in their model considering disabled as primary outgroup and immigrants as secondary outgroup, there was a secondary transfer effect for perspective taking and social distance. Moreover, the effects of contact with disabled generalised to social distance toward immigrants via perspective taking toward both disabled and immigrants and via social distance toward the disabled (Indirect Effect = .006,  $p < .05$ ). Similar findings were obtained with homosexuals as the primary outgroup (Indirect Effect = .019,  $p < .01$ ; Vezzali & Giovannini, 2012).

Together, these findings provide promising empirical evidence for the STE of contact via attitude generalisation. Moreover, these findings are especially encouraging in light of

contact settings where direct, face-to-face intergroup contact with the outgroup of interest is not always viable, but where contact via other, secondary outgroups does in fact occur. In the next section I will discuss empathy generalisation as a mediator of the STE.

### **The Empathy Generalisation Hypothesis**

Empathy refers to the ability to share and understand another person's feelings. It is referred to as a vicarious emotional state that is aroused by observing the feelings and situations of others (Hewstone et al., 2014). The empathic response can be characterized along two dimensions: firstly, a cognitive dimension, which denotes the ability to put oneself in another's shoes; to see the world through their eyes (also referred to as *perspective-taking*; Davis, 1994). Secondly, an affective dimension, which describes experiencing feelings of genuine concern and emotional understanding of another's emotional state (also referred to as *affective empathy*; e.g., Batson et al., 1997; Davis, 1994; see Batson & Ahmad, 2009 for a full review of affective empathy states). Following Pettigrew's (1997) emphasis on perspective taking, I will also focus my review on this type of intergroup empathy.

Support for empathy as a mediator of contact can be found in Pettigrew and Tropp's (2008) meta-analysis, which illustrates that empathy/perspective-taking is a significant mediator of intergroup contact effects ( $z = 12.43, p < .001$ ). More recently, in their three-wave longitudinal study, Swart et al. (2011) found a significant mediation effect of affective empathy of the positive contact-prejudice relationship amongst coloured South African high school students ( $N = 465$ ). Cross-group friendships with white South Africans at Time 1 were significantly positively associated with affective empathy towards the white South African outgroup at Time 2 (Swart et al., 2011). This was subsequently positively associated with improved attitudes towards white South Africans at Time 3, providing strong empirical support for the mediation effect of empathy on the relationship between intergroup contact and outgroup attitudes over time (Swart et al., 2011). Whilst empathy has been shown to be a powerful mediator of the relationship between intergroup contact on outgroup attitudes (Harwood et al., 2005; Pettigrew & Tropp, 2008; Swart et al., 2010, 2011), the present study is concerned with the possibility that empathy improves attitudes beyond a target (primary) outgroup to other (secondary) outgroups.

From the previous section on the attitude generalisation hypothesis, we know that attitudes towards a primary outgroup generalise to other outgroups. Therefore, empathy may influence attitudes towards secondary outgroups through attitudes towards the primary outgroup, with empathy itself being influenced by intergroup contact (Lolliot et al., 2013).

Lolliot and colleagues (2013) propose two routes via which empathy could mediate the STE. Firstly, empathy influences attitudes towards the secondary outgroup through attitudes towards the primary outgroup. Put differently, expanding on the attitude generalisation hypothesis (as described in the previous section; see paths a and b in Figure 2 above), contact with a primary outgroup could stimulate greater empathy towards the primary outgroup (Figure 2, path c), which could lead to more positive attitudes towards the primary outgroup (Figure 2, path d) that will in turn lead to more positive attitudes towards the secondary outgroup (Figure 2, path b). The second pathway describes the empathy generalisation hypothesis. Here, contact with a primary outgroup leads to greater empathy towards the primary outgroup (Figure 2, path c), which in turn increases empathy towards the secondary outgroup (Figure 2, path e), which then stimulates more positive attitudes towards the secondary outgroup (i.e., empathy generalisation hypothesis; Figure 2, path f).

Very little research has been conducted to test this specific mediation path, but there are a few exceptions. Vezzali and Giovannini (2012), for example, tested both these mediation paths amongst Italian high school students ( $N = 175$ ). Results showed, firstly, that contact with immigrants (primary outgroup) not only increased perspective-taking towards immigrants (primary outgroup), but this moreover improved attitudes (lower social distance) towards two dissimilar (secondary) outgroups not directly involved in contact, namely the disabled and homosexuals. These positive attitudes, in turn, generalised and improved attitudes (lower social distance) towards both the secondary outgroups (see Figure 2, paths d and b). Secondly, Vezzali and Giovannini (2012) evinced the empathy generalisation hypothesis by showing that contact with immigrants (primary outgroup) was significantly associated with increased empathy towards both the disabled and homosexuals, which in turn, predicted improved attitudes (lower social distance) towards both these secondary outgroups (see Figure 2, paths e and f). Their study is unique in that it was the first to show that the secondary transfer effect is not confined to intergroup attitudes (i.e., attitude generalisation), but that its mediation via empathy generalisation does in fact, occur.

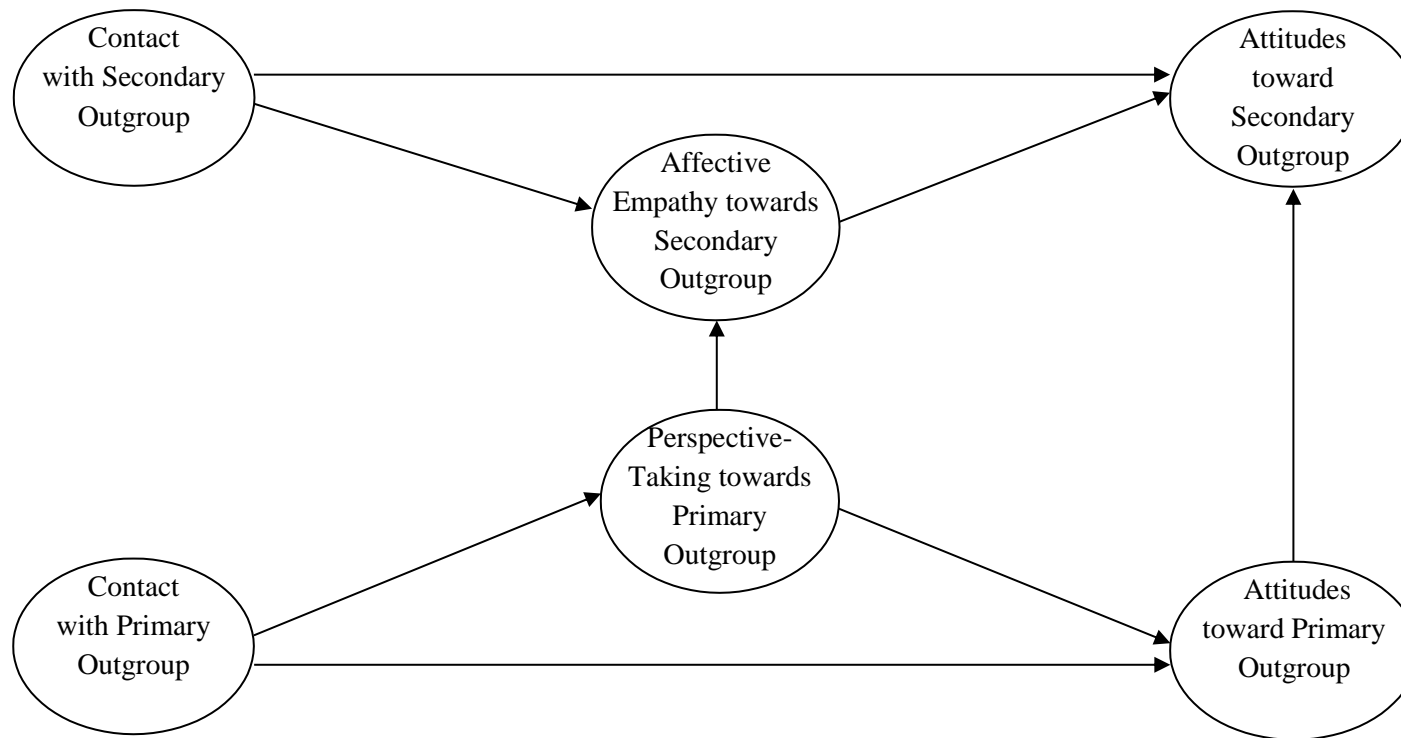
Confirming these results, and expanding on them to include both a cognitive and affective measure of empathy, De Beer (2015) found that perspective-taking towards coloured South Africans (primary outgroup) in general was positively and significantly associated with affective empathy towards black (African) South Africans in general ( $b = .29$ ,  $p < .001$ ), while positive attitudes towards coloured South Africans (primary outgroup) in general were negatively and significantly associated with social distance towards black (African) South Africans (secondary outgroup) in general ( $b = -.35$ ,  $p < .001$ ). The results

therefore supported the STE and once again confirmed that the secondary transfer effect indeed occurs via the processes of both cognitive and affective empathy mediation paths. While these studies are noteworthy and particularly relevant for the present study, their findings must be taken with a word of caution: all three the aforementioned studies relied on cross-sectional designs, and it is therefore not possible to draw causal inferences from their findings. These paths therefore need to be verified using longitudinal and experimental designs. Notwithstanding, this emerging body of literature provides encouraging foundational evidence for the empathy generalisation hypothesis.

Finally, as mentioned in the previous chapter, Batson et al. (1997) proposed a three-step model depicting the relationship between affective and cognitive empathy (see Figure 3 below). In the first step of this model, perspective-taking occurs when the ingroup member adopts the outgroup member's psychological point of view and imagines how this individual is affected by their situation (Figure 3, path a; Batson et al., 1997). In the second step, these empathetic feelings then lead to the perception of increased concern for the individual's welfare (Figure 3, path b). Finally, the increased valuing should ultimately generalise to the group as a whole, thereby increasing positive beliefs about, feelings toward, and concern for the group as a whole (Figure 3, path c; Batson et al., 1997; see Hewstone & Brown, 1986). For purposes of generalisation from one outgroup member to the group as a whole, empathy has the advantage of making group membership salient by reminding people of the experiences a person has as a member of an outgroup (Hewstone et al., 2014). As such, Batson et al.'s (1997) model suggests that cognitive empathetic responding (perspective-taking) *precedes* affective empathetic responding. Following this rationale for empathy generalisation, the present study sought to provide a test of Batson et al.'s (1997) model of the relationship between affective empathy and perspective-taking, thus forming the foundation upon which the hypotheses of the present study are based.

### Summary

The reduction of intergroup prejudice is of great importance in today's increasingly multicultural societies, such as South Africa, and has been the focus of much social psychological research in recent decades. It has been well established that intergroup prejudice can be improved through positive intergroup contact (e.g., Pettigrew & Tropp, 2006), and that improved outgroup attitudes and greater outgroup empathy are able to facilitate this. This secondary transfer effect (STE) broadens the benefits of positive intergroup contact beyond the immediate contact setting, thereby enhancing contact's utility



*Figure 3.* Structural model illustrating Batson et al.'s (1997) three-step model of empathy generalisation within the context of the secondary transfer effect.

as a mechanism for bringing about intergroup harmony. It is therefore little wonder why the STE has become a strong focus of contemporary contact research. Notwithstanding recent developments, STE and its underlying mechanisms have received comparatively little attention in the contact literature and as such, warrant further investigation. To this end, the present study aimed to contribute to the body of research exploring the secondary transfer effect and, given limited research on this subject, aimed to fill the remaining lacunae in the literature on the underlying processes mediating this effect. In the next chapter, I describe the rationale, aims, and hypotheses associated with the present study, after which I present the results that were obtained in the present study.



## **CHAPTER FOUR**

### **TESTING THE SECONDARY TRANSFER EFFECT: ATTITUDES AND EMPATHY**

The reduction of prejudice and the improvement of intergroup relations remains an important objective in the multicultural society of South Africa. It has been well established that intergroup attitudes (prejudice) can be improved through positive intergroup contact (e.g., Pettigrew & Tropp, 2006), and that greater empathy is able to facilitate this. The secondary transfer effect (STE) and empathy generalisation are at the forefront of theoretical developments in contact research (Lolliot et al., 2013). The STE provides a powerful process whereby positive contact encounters with even a few outgroup members could lead to a reduction in prejudice toward that particular outgroup as well as a range of other outgroups not involved in the original contact situation. Contemporary advances in this field include the recognition that attitude generalisation and empathy generalisation are two important potential mediators of the STE (see Lolliot et al., 2013 for a review). However, the literature on the STE remains relatively sparse, especially within the South African context. As such, more research is needed in this regard.

#### **The Present Study**

The present study sought to extend previous South African research on the secondary transfer effect (STE; e.g., De Beer, 2015) by providing a more robust account of the finding that contact with one outgroup correlates with improved attitudes towards a secondary outgroup. Specifically, the present study sought to examine the extent to which the STE of contact may occur due to a process of attitude generalisation, whereby intergroup contact effects on secondary outgroup attitudes are mediated by positive attitude change toward the primary outgroup. Moreover, by considering the potential mediating effects of empathy, a central social psychological predictor of improved intergroup attitudes (Batson & Ahmad, 2009; see also Pettigrew, 2009), the present study makes an important contribution to understanding the underlying mechanisms by which the STE of contact operates. In doing so, the present study aimed to contribute new knowledge to the relatively sparse literature on processes mediating the STE (specifically affective empathy, as opposed to perspective-taking), thus offering practical insights for interventions aimed at reducing prejudice and fostering intergroup harmony.

The present study was undertaken at Stellenbosch University, a higher education institution in South Africa that has witnessed rapid changes in its diversity profile since the

abolishment of apartheid. White South African students constitute the numerical majority at Stellenbosch University (18,764 or 62.2%), followed by a numerical minority of black (African; 5,355 or 17.8%) and coloured South African students (5,238 or 17.4%; Stellenbosch University, 2015). Given their numerical majority at the University, white South African undergraduate students were selected as the *target group* of the present study. Moreover, owing to the definition of the STE initially put forward by Pettigrew (2009), the present study sought to investigate whether the positive effects of contact with a primary outgroup (the group with whom the ingroup member shares contact) are able to generalise towards a (relatively less encountered, or even unencountered) secondary outgroup. The designation of the primary and secondary outgroups in the present study were done accordingly: firstly, given their marginal numerical majority at Stellenbosch University over coloured South Africans, black (African) South Africans constituted the *primary* outgroup in the present study, and coloured South Africans, the *secondary* outgroup. In other words, since the target group of the present study, namely white South African students, statistically have a greater chance (albeit small) of interacting with (and forming friendships with) black (African) as opposed to coloured South African students, I selected black (African) South Africans as the primary outgroup and, consequently, coloured South Africans formed the secondary outgroup.

The present study explored the secondary transfer effect (STE) of intergroup contact via the mechanisms of attitude and empathy generalisation amongst white undergraduate students studying at Stellenbosch University. Specifically, the present study investigated whether cross-group friendships with black (African) South Africans (primary outgroup) would predict more positive attitudes towards coloured South Africans (secondary outgroup) via the process of attitude generalisation, even when controlling for prior contact with coloured South Africans in general (hereafter called the *primary outgroup model*; see Figure 4 below).

Importantly, the logic underlying the STE is that contact with one outgroup exerts positive effects on attitudes not only towards encountered outgroups, but also towards secondary outgroups uninvolved in the contact situation. Since the difference in numerical representations between black (African) and coloured South Africans in Stellenbosch University's (2015) student population is so small (comprising 17.8% and 17.4% of the undergraduate student body, respectively), it is plausible that the target group (i.e., white South Africans) is relatively equally likely to have contact with (or form friendships with) coloured South Africans as they are with black (African) South Africans. As such, the present

study sought to test a second STE model, in which contact with coloured South Africans (the secondary outgroup) exerts STEs towards black (African) South Africans (primary outgroup). More specifically, in addition to testing primary outgroup STEs (as outlined above), the present study also aimed to explore whether cross-group friendships with coloured South Africans (secondary outgroup) is capable of improving attitudes towards black (African) South Africans (primary outgroup) via the process of attitude generalisation, even when controlling for prior contact with black (African) South Africans in general (hereafter called the *secondary outgroup model*; see Figure 5 below).

Further, the present study explicitly sought to examine the processes underlying the STE, specifically empathy generalisation via both cognitive and affective empathetic responding (i.e., perspective-taking and affective empathy) as mediators of the STE. In order to explore the specific pathway from perspective-taking to affective empathy, the present study sought to test Batson et al.'s (1997) model, which (recall from the previous chapter) suggests that perspective-taking *precedes* affective empathy. Thus, in testing the primary outgroup model amongst white respondents, I first examined whether greater perspective-taking towards black (African) South Africans (i.e., primary outgroup) would predict greater affective empathy towards coloured South Africans (i.e., secondary outgroup) via the process of empathy generalisation. Then, in testing the secondary outgroup model, I examined whether greater perspective-taking towards coloured South Africans (i.e., secondary outgroup) would subsequently predict greater affective empathy towards black (African) South Africans (i.e., primary outgroup) via the process of empathy generalisation.

The present study addressed three gaps identified in the contact literature: (1) very little South African contact literature has explored the affective mediational processes underlying the STE; (2) scant research attention has been given to affective empathy (as opposed to perspective-taking) as a mediator of the STE; and (3) little to no research has specifically tested Batson et al.'s (1997) three-step model in order to better understand empathy generalisation via the affective mediational processes that underlie the STE of contact (but see De Beer, 2015). The hypotheses in the present study were therefore theoretically-driven, each of which are detailed below.

## Hypotheses

The present study tested two main hypotheses. The first hypothesis relates to the primary outgroup STE where outgroup attitudes towards the primary outgroup are improved, which, in turn, improve attitudes towards the secondary outgroup via attitude generalisation

and empathy generalisation (i.e., the primary outgroup STE). This hypothesis can be stated as follows: *Cross-group friendships with black (African) South African students will be positively and significantly associated with more positive attitudes towards coloured South Africans, via the processes of empathy and attitude generalisation, after controlling for prior contact with, and affective empathy towards, coloured South Africans in general.* This broad hypothesis can be broken down into the following, more specific predictions:

- 1.1 Cross-group friendships with black (African) South African students at Stellenbosch University will be positively and significantly associated with greater perspective-taking and more positive attitudes towards black (African) South Africans in general (i.e., primary transfer effect);
- 1.2 Perspective-taking towards black (African) South Africans in general will be positively and significantly associated with more positive attitudes towards black (African) South Africans, and will be positively and significantly associated with greater affective empathy towards coloured South Africans in general; (i.e., empathy generalisation as specified by Batson et al., (1997));
- 1.3 Positive attitudes towards black (African) South Africans in general will be significantly negatively associated with social distance towards coloured South Africans in general (i.e., attitude generalisation); and
- 1.4 Affective empathy towards coloured South Africans in general will be negatively and significantly associated with social distance towards coloured South Africans in general<sup>1</sup>.

The second hypothesis relates to the secondary outgroup STE where outgroup attitudes towards the secondary outgroup are improved, which, in turn, improve attitudes towards the primary outgroup via attitude generalisation and empathy generalisation (i.e., the secondary outgroup STE). This hypothesis can be stated as follows: *Cross-group friendships with coloured South African students will be positively and significantly associated with more positive attitudes towards black (African) South Africans, via the processes of empathy and attitude generalisation, after controlling for prior contact with, and affective empathy towards, black (African) South Africans in general.* This broad hypothesis can be broken down into the following predictions:

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<sup>1</sup> Note that each of these hypotheses relating to the primary outgroup STE were investigated while controlling for prior contact with, and affective empathy towards, coloured South Africans in general.

2.1 Cross-group friendships with coloured South African students at Stellenbosch University will be positively and significantly associated with greater perspective-taking and more positive attitudes towards coloured South Africans in general (i.e., primary transfer effect);

2.2 Perspective-taking towards coloured South Africans in general will be positively and significantly associated with more positive attitudes towards coloured South Africans, and will be positively and significantly associated with greater affective empathy towards black (African) South Africans in general; (i.e., empathy generalisation as specified by Batson et al., (1997));

2.3 Positive attitudes towards coloured South Africans in general will be significantly negatively associated with social distance towards black (African) South Africans; (i.e., attitude generalisation); and

2.4 Affective empathy towards black (African) South Africans in general will be negatively and significantly associated with social distance towards black (African) South Africans in general<sup>2</sup>.

## Method

### Procedure

Using a quantitative, cross-sectional research design, the present study explored the effects of cross-group friendship on affective and cognitive measures of prejudice held amongst white South African undergraduate students studying at Stellenbosch University. Respondents were asked to answer an online survey during the second academic term of 2015. Prior to the commencement of the data collection, ethical clearance for this study was obtained from the Research Ethics Committee (Humanities) at Stellenbosch University (REC clearance number: HS1051/2014), and Institutional clearance was obtained from Stellenbosch University to allow access to the email addresses of prospective respondents.

Electronic (e-mail) invitations were sent out to 14,185 South African undergraduate students studying on the Main Campus at Stellenbosch University, inviting them to participate in the study (see Appendix A). Each e-mail invitation contained a unique Uniform Resource Locator (URL; found on the SURveys.sun.ac.za portal) that allowed prospective

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<sup>2</sup> Each of these hypotheses relating to the secondary outgroup STE were investigated while controlling for prior contact with, and affective empathy towards, black (African) South Africans in general.

respondents to access the unique survey portal created for the present study. Once respondents accessed the URL, they were presented with an electronic informed consent form (Appendix B), which provided them with a brief outline of the study, and explained the conditions of confidentiality and anonymity under which they were participating in the survey, as well as their right to freely exit the survey at any point in time without consequences of any kind. Respondents were given the opportunity to either 'Agree' to the terms and conditions (and proceed to the survey), or 'Disagree' (and exit the survey portal). Respondents who chose to 'Agree' to these terms and conditions were directed to the online survey and those who chose not to participate in the survey exited from the survey portal. As an incentive to encourage participation, students who submitted a completed survey were entered into a cash prize draw (to the value of R1,000) upon the completion of the survey. Respondents who agreed to participate in the study were first presented with biographical and demographic questions (see Appendix C), followed by the main survey (see Appendix D). All materials were presented to respondents in both English and Afrikaans (the two primary languages of tuition at Stellenbosch University). Importantly, the survey was configured so that it was not possible to have any missing data. Specifically, respondents could not proceed to the next page without completing all the required fields.

Biographical and demographic information obtained included the respondent's gender, age, first (home) language, the number of years they have been studying at Stellenbosch University, and whether they make use of university (hostel or university housing) or private accommodation (see Appendix C). Respondents were also asked to indicate whether they identify themselves as a white South African, black (African) South African, coloured South African, Indian South African or Asian South African. Importantly, while electronic (e-mail) invitations were sent out to all undergraduate students (comprising a variety of ethnicities), for the purposes of the present study, only the data of respondents who identified themselves as white South Africans were included in the analyses presented below.

## **Questionnaire**

The main survey (Appendix D) explored the following constructs among white South Africans regarding their intergroup relations with black (African) and coloured South Africans as the respective primary and secondary outgroups: (1) general intergroup contact, (2) cross-group friendships, (3) perspective-taking, (4) affective empathy (5) positive outgroup attitudes, and (6) social distance. These constructs were derived from prior studies that have demonstrated the factorial validity and reliability of these constructs amongst

majority-status samples internationally (e.g., Batson et al., 1997; Davis, 1994; Turner et al., 2007b; Wright et al., 1997) and/or in the South African context when administered amongst white South Africans (e.g., Swart, 2008; Swart et al., 2010; 2011).

Furthermore, in an attempt to limit the potential impact of shared method variance on the data (see Podsakoff et al., 2003), the present study utilised two measures of intergroup contact (i.e., general contact and cross-group friendship), empathic responding (i.e., perspective-taking and affective empathy), and prejudice (i.e., positive outgroup attitudes and social distance) to measure each construct for the primary and secondary outgroup respectively. Also note that the measures were all constructed as Likert scales, with five response options available for each question. Scales were scored (and where necessary reverse scored) such that higher scores reflect more general intergroup contact and cross-group friendships, greater perspective-taking, greater affective empathy, more positive outgroup attitudes, and a greater desire for social distance from the respective outgroup.

#### **General intergroup contact.**

The general contact measure (adapted from Swart, 2008; Swart et al., 2010; 2011) consisted of three items. Respondents were asked how regularly they have direct, face-to-face interactions (e.g., conversations) in social settings [outgroup] South Africans; how regularly do you have direct, face-to-face interactions (e.g., conversations) with [outgroup] South Africans as part of the same sports team/social club/campus society; and how regularly they have direct, face-to-face interactions (e.g., conversations) with [outgroup] South Africans during lectures, practicals, and/or tutorials. Each item was scaled from 0 = *Never* to 4 = *Always*. This three-item measure of general intergroup contact with black (African) and coloured South Africans yielded adequate scale reliability (Cronbach's alpha coefficient) amongst white South African respondents, with  $\alpha = .74$  and  $\alpha = .84$ , respectively.

#### **Cross-group friendship.**

A two-item measure of cross-group friendship (adapted from Swart, 2008; Swart et al., 2010; 2011) asked respondents the following: How many [outgroup] South African friends do you have in general, scaled as follows: 0 = *None*, 1 = *One*, 2 = *Between two and five*, 3 = *Between five and ten*, and 4 = *More than ten*; and how often do you spend time with your [outgroup] South African friends in general, which was scaled from 0 = *Never* to 4 = *All the time*. This two-item measure of cross-group friendships yielded a significant bivariate correlation of  $r = .47$ ,  $p < .000$  for cross-group friendships with black (African) and  $r = .46$ ,



$p < .000$  for cross-group friendships with coloured South Africans respectively, indicating that both items measure a related underlying construct among both the primary and secondary outgroups respectively, suggesting good construct reliability.

### **Perspective-taking.**

A three-item measure of perspective-taking (based on Batson et al., 1997; Davis, 1994) asked respondents to indicate the extent to which they agreed or disagreed with each of the following statements: I believe I understand what it is like to be a [outgroup] South African in this society; I can easily put myself in the place of [outgroup] South Africans when I want to understand their viewpoint; and I don't understand the way [outgroup] South Africans view the world (reverse scored). Each item was scaled from 1 = *completely disagree* to 5 = *completely agree*. This three-item measure was aggregated in a reliable index of perspective-taking towards both black (African) South Africans ( $\alpha = .67$ ) and coloured South Africans ( $\alpha = .72$ ) respectively.

### **Affective empathy.**

A three-item measure of affective empathy (based on Davis, 1994; Turner et al., 2007b) asked respondents to indicate the extent to which they agreed or disagreed with the following three statements: If I saw a [outgroup] South African was feeling sad, I think that it would also make me feel sad; If I saw a [outgroup] South African was feeling happy, I think that it would also make me feel happy; and When I hear about the misfortunes of a [outgroup] South African, it usually makes me feel sorry for him/her (scaled for each item from 1 = *completely disagree* to 5 = *completely agree*). This three-item measure was shown to be a reliable index of affective empathy towards both black (African) South Africans ( $\alpha = .85$ ) and coloured South Africans ( $\alpha = .76$ ) respectively.

### **Positive outgroup attitudes.**

Positive outgroup attitudes were measured on a four-item scale adapted from Swart et al. (2011) and Wright et al. (1997) that asked respondents to rate the extent to which they agreed or disagreed with the following statements: When I think about [outgroup] South Africans in general, I have positive feelings towards them; when I think about [outgroup] South Africans in general, I admire them; when I think about [outgroup] South Africans in general, I am filled with respect for them; and when I think about [outgroup] South Africans in general, I have negative feelings towards them (reverse scored). Each item was scaled from



1 = *completely disagree* to 5 = *completely agree*. This four-item measure of positive outgroup attitudes towards black (African) and coloured South Africans had good scale reliability, with  $\alpha = .87$  and  $\alpha = .83$ , respectively.

### **Social distance.**

Social distance was measured using a three-item scale adapted from Bogardus (1933). Respondents were asked to rate the extent to which they would be happy to have a [outgroup] South African or [outgroup] South Africans attending the same classes as them; as a roommate/flatmate/housemate in their residence/apartment block; and as an intimate partner (e.g., boyfriend/girlfriend). Each item was scaled from 1 = *Not at all happy* to 5 = *Very happy*. This three-item measure was shown to be a reliable index of social distance amongst these white South African respondents ( $\alpha = .76$  for social distance towards black (African) South Africans; and  $\alpha = .73$  for social distance towards coloured South Africans).

### **Respondents**

The final sample included 866 white South African undergraduate students studying at Stellenbosch University (N = 470 females, N = 396 males), whose ages ranged between 18 and 42 years ( $M_{\text{age}} = 20.16$  years,  $SD_{\text{age}} = 1.75$  years). Of the 866 respondents, 43.53% (N = 377) indicated that English was their first language and 56.47% (N = 489) indicated that Afrikaans was their first language. Respondents indicated having spent an average of 2.37 years ( $SD = 1.24$  years) studying at Stellenbosch University. Just more than half of the respondents in the present study indicated that they lived in private accommodation (53.57%; N = 464), while 35.45% (N = 307) indicated that they lived in university residences and 10.97% (N = 95) indicated they lived with their parents/legal guardians.

## **Results**

### **Preliminary Data Analyses**

Preliminary data analyses were conducted using the Statistical Package for the Social Sciences (SPSS) to see if the data met the necessary parametric assumptions. First, I assessed the item distributions for each item by exploring the extent of item skewness and kurtosis using the cutoff criteria suggested by West, Finch, and Curran (1995). West et al. (1995) proposed that values of skewness between  $-2.00$  and  $2.00$  and values of kurtosis between  $-7.00$  and  $7.00$  suggest sufficient normality of item distributions when planning to undertake

confirmatory factor analyses (CFAs) using the maximum likelihood estimator (see also Swart et al., 2011). Preliminary analyses of the item distributions showed values of skewness ( $\text{Min}_{\text{skew}} = 1.62$ ,  $\text{Max}_{\text{skew}} = 1.75$ ;  $M_{\text{skew}} = -0.23$ ,  $SD_{\text{skew}} = 0.71$ ) and kurtosis ( $\text{Min}_{\text{kurt}} = -1.20$ ,  $\text{Max}_{\text{kurt}} = 2.71$ ;  $M_{\text{kurt}} = -0.27$ ,  $SD_{\text{kurt}} = 1.06$ ) that were well within the acceptable ranges suggested by West et al. (1995).

Next, I explored construct factor validity independently for each factor via exploratory factor analyses (EFAs) using a maximum likelihood estimator, to confirm the unidimensionality of each multi-item measured construct. Direct oblimin rotation was used in light of the assumption that if more than a single factor were to emerge from the data for any given construct, those factors would share common variance (i.e., be related to one another). This assumption is tenable in that each measure was originally designed to include content that would support the face validity of a single factor (unidimensional) construct. A minimum factor loading of .40 was set as the threshold for retaining items on the first factor (See Field, 2010). Any item that loaded onto a factor with a factor loading of less than .40 was excluded from all further analyses. The results from these factor analyses showed that each of the multi-item scales was indeed unidimensional.

Where necessary, reliability coefficients were calculated using Cronbach's alpha, which indicated acceptable construct reliability for each construct (i.e.,  $\alpha \geq .65$ ). Bivariate correlations (Pearson's product-moment correlations,  $r$ ) were calculated to estimate the internal consistency of the two-item measures. Mean-level composite measures were created by averaging the raw scores of the observed variables that were retained for the final analyses separately for each of the primary constructs (averaged across the scale's items). The Pearson's product-moment correlations ( $r$ ) between the mean-level composite variables, as well as the construct reliability, means and standard deviations (SD) of each of the mean-level composite variables are summarised in Table 1.

Finally, I conducted a paired samples t-test in order to compare the general amount of contact that the white South African respondents reported having with black (Africans) and coloured South Africans in general. The t-test showed that the white South African respondents reported significantly more general contact with coloured South Africans ( $M = 2.49$ ,  $SD = 0.92$ ) than with black (African) South Africans at Stellenbosch University ( $M = 2.37$ ,  $SD = 0.85$ ;  $t(734) = 3.75$ ,  $p < .001$ ). Similarly, a comparison of cross-group friendships showed that white South African respondents reported significantly more cross-group friendships with coloured South Africans ( $M = 2.64$ ,  $SD = 0.82$ ) than with black

(African) South Africans at Stellenbosch University ( $M = 2.53$ ,  $SD = 0.76$ ;  $t(734) = 3.21$ ,  $p < .01$ ). While these findings do not support the *a priori* designation of black (African)

Table 1. *Pearson Product-Moment Correlations between Mean-Level Composite Variables, Construct Reliability ( $\alpha$ ), Mean and Standard Deviation (SD)*

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	Alpha ( $\alpha$ )	Mean (SD)
<b>1. General Contact with coloured South Africans (3 items)</b>	-												.84	2.48 (0.92)
<b>2. General Contact with black (African) South Africans (3 items)</b>	.54***	-											.74	2.36 (0.85)
<b>3. Cross-group Friendships with coloured South Africans (2 items)</b>	.65***	.30***	-										.46***†	2.64 (0.82)
<b>4. Cross-group Friendships with black (African) South Africans (2 items)</b>	.24***	.58***	.37***	-									.47***†	2.53 (0.76)
<b>5. Perspective-taking towards coloured South Africans (3 items)</b>	.29***	.18***	.21***	.06	-								.72	3.13 (0.91)
<b>6. Perspective-taking towards black (African) South Africans (3 items)</b>	.11**	.28***	.02	.25**	.55**	-							.67	2.73 (0.92)
<b>7. Affective Empathy towards coloured South Africans (3 items)</b>	.19***	.19***	.12**	.16***	.04	.14***	-						.76	4.23 (0.76)
<b>8. Affective Empathy towards black (African) South Africans (3 items)</b>	.13***	.21***	.08*	.21***	-.01	.21***	.83***	-					.76	4.15 (0.86)
<b>9. Positive Outgroup Attitudes towards coloured South Africans (4 items)</b>	.29***	.23***	.27***	.22***	.23***	.17***	.43***	.33***	-				.87	3.68 (0.77)
<b>10. Positive Outgroup Attitudes towards black (African) South Africans (4 items)</b>	.13***	.28***	.10**	.31***	.06	.33***	.37***	.49***	.55***	-			.87	3.23 (0.96)
<b>11. Social Distance towards coloured South Africans (3 items)</b>	-.30***	-.31***	-.30***	-.29***	-.19*	-.13***	-.30***	-.30***	-.43***	-.43***	-		.73	2.39 (0.97)
<b>12. Social Distance towards black (African) South Africans (3 items)</b>	-.22***	-.37***	-.19***	-.36***	-.02	-.21***	-.29***	-.37***	-.32***	-.32***	.86***	-	.73	2.60 (1.02)

†Bivariate correlations (Pearson's  $r$ ) for construct comprised of only two items. \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

*Note.* Scales were scored (and where necessary reverse scored) such that higher scores reflect more direct intergroup contact (scaled from 0-4), more cross-group friendships (scaled from 0-4), greater perspective-taking (scaled from 1-5), greater affective empathy (scaled from 1-5), more positive outgroup attitudes (scaled from 1-5), and greater social distance (scaled from 1-5).

South Africans as the primary outgroup and coloured South Africans as the secondary outgroup, it is on the basis of the demographics at Stellenbosch University that I chose to keep the outgroups' designation as is. However, considering there appears to be significantly greater intergroup contact among white respondents with coloured South Africans, the abovementioned results substantiate my inclusion of the secondary outgroup model in the present study, where contact with coloured South Africans comprises the contact situation. I will return to this point in greater detail when I discuss the findings of the present study.

## **Main Analyses**

### **Structural Equation Modeling with Latent Constructs**

To test the aforementioned hypotheses and predictions, I specified two models, one for each of the primary and secondary outgroups considered: black (African) South Africans (primary outgroup model, Figure 4), and coloured South Africans (secondary outgroup model, Figure 5). The structural relationships between the variables were investigated separately for each model via the powerful statistical technique of latent variable Structural Equation Modeling (SEM; Mplus v3.11; Muthén & Muthén, 2005). Each of the explored constructs can be regarded as a latent (unobserved) construct, measured by manifest (observed) indicators (the individual items). In other words, for each variable, the individual items that were used to measure each particular latent construct served as the manifest indicators for that particular latent construct. Importantly, I used a two-step approach to SEM in the present study. In the first step, I tested the measurement model and then proceeded to test the structural model in the second step (See Anderson & Gerbing, 1988). The results of the present study are each presented below for the primary and secondary outgroup models respectively.

#### **Primary outgroup model.**

In testing the primary outgroup STE model, the measurement model (maximum likelihood [ML] estimates) showed adequate model fit, with  $\chi^2 (120) = 324.85, p < .000$ ,  $\chi^2/df = 2.71$ ; comparative fit index (CFI) = .961; root mean square error of approximation (RMSEA) = .044; and standardized root mean square residual (SRMR) = .047, thereby confirming the discriminant validity of each construct in this model. The criteria for acceptable model fit for these goodness-of-fit indices were defined by a non-significant

$\chi^2$  value (or a relative chi-square [ $\chi^2/df$ ] ratio  $\leq 3-4$  if sample size is large; Kline, 2005), CFI  $\geq .90$ , RMSEA  $< .08$ , and SRMR  $< .08$  (Hu & Bentler 1999).

In the second step, I tested the structural model. The structural model (maximum likelihood [ML] estimates) showed adequate model fit, with  $\chi^2 (126) = 445.59, p < .000$ ,  $\chi^2/df = 3.53$ ; CFI = .950; RMSEA = .054; SRMR = .073, confirming the goodness-of-fit for the structural paths specified among the variables. As shown in Figure 4 below, cross-group friendships with black (African) South Africans at Stellenbosch University were positively and significantly associated with greater perspective-taking towards black (African) South Africans in general ( $b = .34, p < .001$ ), which, in turn, significantly predicted positive attitudes towards black (African) South Africans in general ( $b = .17, p < .001$ ). Perspective-taking towards black (African) South Africans in general was significantly associated with greater affective empathy towards coloured South Africans in general ( $b = .15, p < .001$ ), while positive attitudes towards black (African) South Africans in general significantly predicted a reduction in social distance towards coloured South Africans in general ( $b = -.42, p < .001$ ). General contact with coloured South Africans in general was positively and significantly associated with greater affective empathy towards coloured South Africans ( $b = .22, p < .001$ ), which, in turn, significantly predicted a reduction in social distance towards coloured South Africans in general ( $b = -.12, p < .01$ ). Importantly, it should be noted that using different attitude measures (i.e., social distance towards black (African) South Africans; and positive attitudes towards coloured South Africans) yielded the same results (i.e., reduced social distance towards black (African) South Africans, and improved attitudes towards coloured South Africans).

*Indirect effects.* The inspection of indirect effects was a necessary final step in order to verify that the predicted indirect relationships were significant. A series of bootstrap mediation tests (with 5,000 resamples; Preacher & Hayes, 2004, 2008) were run in Mplus (Muthén & Muthén, 2005) to test whether the hypothesised indirect relationships (mediation effects) were significant (Baron & Kenny, 1986). Altogether, six indirect paths were specified per model.

The results for the primary outgroup model confirmed that perspective-taking towards black (African) South Africans in general significantly mediated the indirect effects of cross-group friendships with black (African) South Africans at Stellenbosch University on positive attitudes towards black (African) South Africans in general ( $b = .05, p < .01$ ). Perspective-taking towards black (African) South Africans in general significantly mediated the relationship between cross-group friendships with black (African) South Africans at

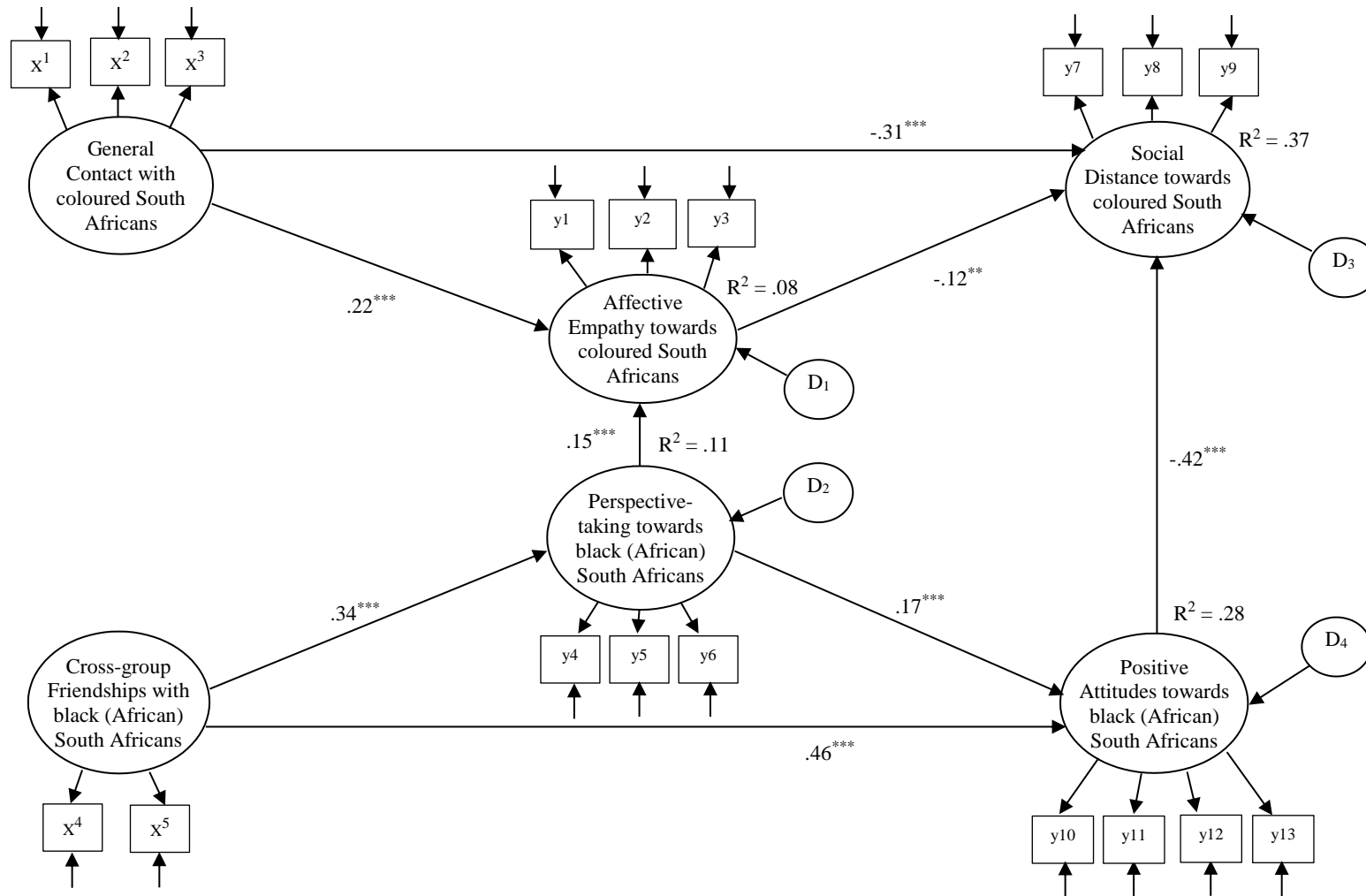


Figure 4. Primary outgroup model. Structural equation model illustrating the STE of intergroup contact among white South Africans ( $N = 866$ ), via attitude and empathy generalisation from black (African) South Africans (primary outgroup) to coloured South Africans (secondary outgroup).

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ ; Unstandardized coefficients; only significant paths are reported.

Note. All scales calibrated such that higher mean values denote higher levels of a particular construct.



Stellenbosch University and affective empathy towards coloured South Africans in general ( $b = .06, p < .01$ ). Cross-group friendships with black (African) South Africans at Stellenbosch University had a significant indirect effect on social distance towards coloured South Africans in general, via positive attitudes towards black (African) South Africans in general ( $b = -.19, p < .001$ ). General contact with coloured South Africans had a significant indirect effect on social distance towards coloured South Africans via affective empathy towards coloured South Africans ( $b = -.03, p < .01$ ).

Affective empathy towards coloured South Africans was a significant mediator of the indirect effect of perspective-taking towards black (African) South Africans via social distance towards coloured South Africans ( $b = -.02, p < .05$ ), while perspective-taking towards black (African) South Africans also had a significant indirect effect on social distance towards coloured South Africans via positive attitudes toward black (African) South Africans ( $b = -.06, p < .01$ ). This model explained 11% of the variance ( $R^2$ ) in perspective-taking towards black (African) South Africans, 8% of the variance in affective empathy towards coloured South Africans, 28% of the variance in positive attitudes towards black (African) South Africans, as well as 37% of the variance in social distance towards coloured South Africans. In each instance, this constituted a significant proportion of the explained variance ( $p < .001$ ).

### **Secondary outgroup model.**

In testing the secondary outgroup model, measurement model fit was found to be adequate, with  $\chi^2 (120) = 324.24, p < .000, \chi^2/df = 2.70$ ; comparative fit index (CFI) = .961; root mean square error of approximation (RMSEA) = .044; standardized root mean square residual (SRMR) = .040, thereby confirming the discriminant validity of each construct in this model. As with the previous model, after obtaining satisfactory model fit for the measurement model, I proceeded to test the structural model. Results for the structural model (maximum likelihood [ML] estimates) showed adequate model fit, with  $\chi^2 (126) = 415.56, p < .000, \chi^2/df = 3.29$ ; CFI = .950; RMSEA = .052; SRMR = .064, confirming the goodness-of-fit for the structural paths specified among the variables.

As shown in Figure 5 below, cross-group friendships with coloured South Africans at Stellenbosch University were positively and significantly associated with perspective-taking towards coloured South Africans in general ( $b = .31, p < .001$ ), which, in turn, significantly predicted positive attitudes towards coloured South Africans in general ( $b = .13, p < .01$ ). The

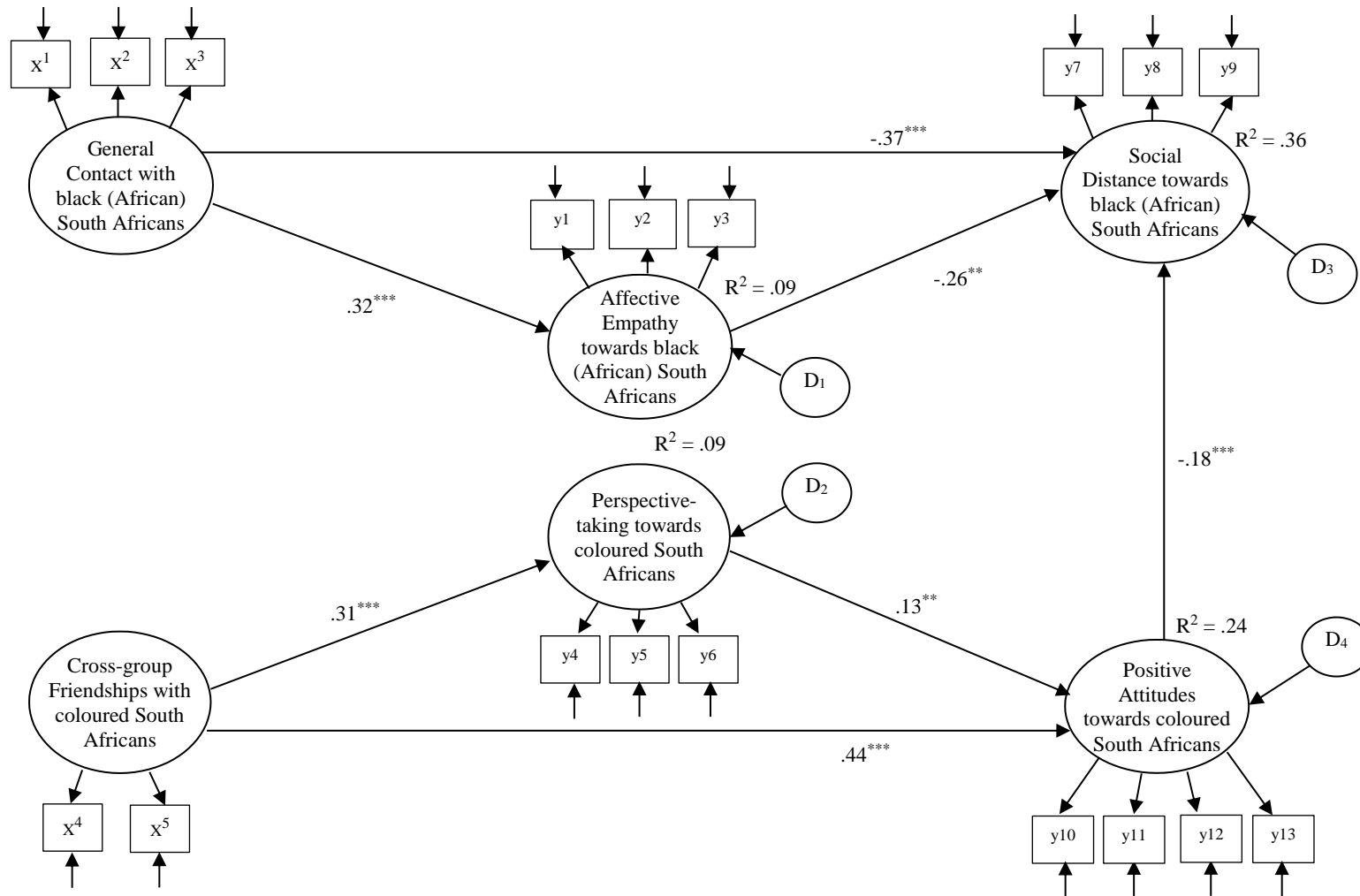


Figure 5. Secondary outgroup model. Structural equation model illustrating the STE of intergroup contact among white South Africans ( $N = 866$ ), via attitude and empathy generalisation from coloured South Africans (secondary outgroup) to black (African) South Africans (primary outgroup).

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ ; Unstandardized coefficients; only significant paths are reported.

Note. All scales calibrated such that higher mean values denote higher levels of a particular construct.

path from perspective-taking towards coloured South Africans to affective empathy towards black (African) South Africans yielded a negative relationship, and failed to reach significance ( $b = -.07, p = .08$ ). This unexpected finding will be addressed in the following chapter. Positive attitudes towards coloured South Africans in general significantly predicted a reduction in social distance towards black (African) South Africans in general ( $b = -.18, p < .001$ ). General contact with black (African) South Africans in general was positively and significantly associated with greater affective empathy towards black (African) South Africans ( $b = .32, p < .001$ ), which, in turn, significantly predicted a reduction in social distance towards black (African) South Africans in general ( $b = -.26, p < .01$ ). Once again, it is worth noting that using different attitude measures (i.e., social distance towards coloured South Africans and positive attitudes towards black African) South Africans) yielded the same results (i.e., reduced social distance towards coloured South Africans; and improved attitudes towards black (African) South Africans).

*Indirect effects.* A summary of the unstandardized beta coefficients denoting size of indirect effects for both the primary and secondary outgroup models is presented in Table 2 below. The results for the secondary outgroup model demonstrated that perspective-taking towards coloured South Africans in general significantly mediated the indirect effects of cross-group friendships with coloured South Africans at Stellenbosch University on positive attitudes towards coloured South Africans in general ( $b = .04, p < .001$ ). The indirect path from cross-group friendships with coloured South Africans at Stellenbosch University, via perspective-taking towards coloured South Africans, to affective empathy towards black (African) South Africans, yielded a negative relationship that failed to reach significance ( $b = -.02, p = .09$ ). Cross-group friendships with coloured South Africans at Stellenbosch University had a significant indirect effect on social distance towards black (African) South Africans in general, via positive attitudes towards black (African) South Africans in general ( $b = -.19, p < .001$ ). General contact with black (African) South Africans had a significant indirect effect on social distance towards black (African) South Africans via affective empathy towards black (African) South Africans ( $b = -.08, p < .001$ ).

Perspective-taking towards coloured South Africans had a significant indirect effect on social distance towards black (African) South Africans via positive attitudes toward coloured South Africans ( $b = -.02, p < .05$ ). However, the indirect path from perspective-taking towards coloured South Africans, via affective empathy towards black (African) South Africans, to social distance towards black (African) South Africans failed to reach significance ( $b = .02, p = .11$ ). Nevertheless, this model explained 9% of the variance ( $R^2$ ) in

Table 2. *Unstandardized Beta Coefficients Denoting Size of Indirect Effects, Associated 95% Confidence Intervals, and Significance Levels*

Primary Outgroup Indirect Effects						
Predictor	Mediator	Outcome	Unstandardized (b)	Bootstrapped 95% confidence intervals		Significance level
				Lower limit	Upper limit	
General Contact with coloured South Africans	Affective Empathy towards coloured South Africans	Social Distance towards coloured South Africans	-.03	-.01	.00	$p < .05$
Cross-group Friendships with black (African) South Africans	Positive Attitudes towards black (African) South Africans	Social Distance towards coloured South Africans	-.19	-.09	-.08	$p < .001^\dagger$
	Perspective-taking towards black (African) South Africans	Positive Attitudes towards black (African) South Africans	.05	.10	.12	$p < .01$
	Perspective-taking towards black (African) South Africans	Affective Empathy towards coloured South Africans	.06	.09	.11	$p < .01^\dagger$
Perspective-taking towards black (African) South Africans	Affective Empathy towards coloured South Africans	Social Distance towards coloured South Africans	-.02	-.00	.00	$p < .05^\dagger$
	Positive Attitudes towards black (African) South Africans	Social Distance towards coloured South Africans	-.19	-.09	-.07	$p < .001^\dagger$
Secondary Outgroup Indirect Effects						
General Contact with black (African) South Africans	Affective Empathy towards black (African) South Africans	Social Distance towards black (African) South Africans	-.08	-.04	-.04	$p < .001$
Cross-group Friendships with coloured South Africans	Positive Attitudes towards coloured South Africans	Social Distance towards black (African) South Africans	-.08	-.04	-.02	$p < .001^\dagger$
	Perspective-taking towards coloured South Africans	Positive Attitudes towards coloured South Africans	.04	.06	.07	$p < .01$
	Perspective-taking towards coloured South Africans	Affective Empathy towards black (African) South Africans	-.02	.00	.01	$p = .09$
Perspective-taking towards coloured South Africans	Affective Empathy towards black (African) South Africans	Social Distance towards black (African) South Africans	.02	.02	.03	$p = .10$
	Positive Attitudes towards coloured South Africans	Social Distance towards black (African) South Africans	-.02	-.01	.00	$p < .05^\dagger$

$^\dagger$ Evidence for a significant secondary transfer effect (STE) via either empathy or attitude generalisation.

*Note.* The results obtained in the primary outgroup model were obtained even after controlling for prior general contact with, and affective empathy towards, coloured South Africans. Likewise, the results obtained in the secondary outgroup model were obtained even after controlling for prior general contact with, and affective empathy towards, black (African) South Africans.

perspective-taking towards coloured South Africans, 9% of the variance in affective empathy towards black (African) South Africans, 24% of the variance in positive attitudes towards coloured South Africans, as well as 36% of the variance in social distance towards black (African) South Africans. In each instance, this constituted a significant proportion of the explained variance ( $p < .001$ ).

### Summary of Findings

In terms of the *a priori* hypotheses and predictions made, the first broad hypothesis, namely that positive intergroup contact with black (African) South Africans would predict improved attitudes towards this outgroup, which would, in turn, predict more positive attitudes to a coloured South Africans via attitude and empathy generalisation, received full support. More specifically, cross-group friendships with black (African) South Africans at Stellenbosch University were positively and significantly associated with more positive attitudes and greater perspective-taking towards black (African) South Africans in general (illustrating a primary transfer effect) even after controlling for prior contact with coloured South Africans. Perspective-taking towards black (African) South Africans in general was positively and significantly associated with more positive attitudes towards black (African) South Africans, and positively and significantly associated with greater affective empathy towards coloured South Africans in general (illustrating the process of empathy generalisation), even after controlling for prior contact with and affective empathy towards coloured South Africans. This finding also offers tentative support for the causal sequencing of perspective-taking and affective empathy suggested by Batson et al. (1997). Positive attitudes towards black (African) South Africans in general were significantly negatively associated with social distance towards coloured South Africans in general (illustrating the process of attitude generalisation), even after controlling for prior contact with coloured South Africans. Finally, affective empathy towards coloured South Africans in general was negatively and significantly associated with social distance towards coloured South Africans in general.

The second broad hypothesis, namely that positive intergroup contact with coloured South Africans would predict improved attitudes towards this outgroup, which would, in turn, predict more positive attitudes to black (African) South Africans via attitude and empathy generalisation, received only partial support. Specifically, cross-group friendships with coloured South Africans at Stellenbosch University were positively and significantly associated with more positive attitudes and greater perspective-taking towards coloured South

Africans in general (illustrating a primary transfer effect), even after controlling for prior contact with black (African) South Africans. Perspective-taking towards coloured South Africans in general was positively and significantly associated with more positive attitudes towards coloured South Africans, but was negatively and non-significantly associated with affective empathy towards black (African) South Africans in general, even after controlling for prior contact with, and affective empathy towards black (African) South Africans (no evidence was obtained for empathy generalisation). Nevertheless, positive attitudes towards coloured South Africans in general were significantly negatively associated with social distance towards black (African) South Africans in general (illustrating the process of attitude generalisation), even after controlling for prior contact with black (African) South Africans. Finally, affective empathy towards black (African) South Africans significantly reduced social distance towards black (African) South Africans in general. Each of these findings are discussed in more detail in the following chapter.

## CHAPTER FIVE

### DISCUSSION

The secondary transfer effect (STE) of intergroup contact has only recently started receiving attention in the contact literature (Pettigrew, 1997, 2009; Lolliot et al., 2013; Schmid et al., 2012, 2014; Tausch et al., 2010). Nonetheless, the emerging literature on the STE confirms that this effect is indeed a real phenomenon, with the most recent literature suggesting that it may be driven by attitude and empathy generalisation (for a review, see Lolliot et al., 2013). The present study adds to the growing body of research on intergroup contact's STE and, given the scarcity of the available literature investigating this powerful process, extends prior South African research considering the previously explored constructs of attitude and empathy generalisation that help explain the operation of the STE (e.g., De Beer, 2015).

The present study tested two main hypotheses using latent-variable structural equation modeling (SEM; Mplus v3.11; Muthén & Muthén, 2005) in a cross-sectional study amongst a relatively large sample of white South African students studying at Stellenbosch University. First, I predicted that cross-group friendships with black (African) South Africans would improve attitudes towards black (African) South Africans in general, which would, in turn, improve attitudes towards coloured South Africans via the processes of attitude and empathy generalisation (even after controlling for friendships with coloured South Africans in general; primary outgroup model). Second, I predicted that cross-group friendships with coloured South Africans would improve attitudes towards coloured South Africans in general, which would, in turn, improve attitudes towards black (African) South Africans via the processes of attitude and empathy generalisation (even after controlling for friendships with black (African) South Africans in general; secondary outgroup model).

In doing so, the present study aimed to address certain lacunae in the STE literature, specifically by (1) exploring the affective mediational processes underlying the STE using the powerful technique of SEM; (2) giving attention to affective empathy (as opposed to only perspective-taking) as a mediator of the STE (see Lolliot et al., 2013); and (3) testing Batson et al.'s (1997) three-step model of empathy generalisation. These predictions were developed on the grounds of the most recent review of the emerging contact literature on the STE (see Lolliot et al., 2013) as well as the paucity of research that exists exploring Batson et al.'s (1997) model (e.g., De Beer, 2015).



Having found overall support for the first broad hypothesis, and limited support second hypothesis, I turn now to a discussion of the findings relating to each of the core features of the main hypotheses, namely evidence of the STE in the present study and evidence of the mediational value of attitude and empathy generalisation underlying the STE. I begin with a discussion of the results from the present study that illustrate the generalisation of improved attitudes from the primary outgroup exemplar to the outgroup as a whole, and the subsequent generalisation of these improved attitudes to the secondary outgroup (uninvolved in the contact experience), before proceeding to how these effects manifested in the secondary outgroup model. I then take a closer look at the two processes that were observed to mediate primary outgroup attitudes in the present study, namely attitude and empathy generalisation, and this is followed by a speculation of why these findings were not fully replicated in the secondary outgroup model. Finally, the limitations of the present study are discussed and directions for future research are put forward.

### **The Secondary Transfer Effect of Intergroup Contact**

In primary outgroup model, two primary effects were observed: firstly, general contact with coloured South Africans significantly reduced social distance towards coloured South Africans in general. Secondly, cross-group friendships with black (African) South African students were positively and significantly associated with more positive attitudes towards black (African) South Africans in general. These primary effects were mirrored in the secondary outgroup model, in which general contact with black (Africans) significantly reduced social distance towards black (African) South Africans. In addition, cross-group friendships with coloured South Africans significantly improved attitudes towards coloured South Africans in general.

These results unequivocally confirm the underlying tenet of the contact hypothesis (Allport, 1954), which states that positive intergroup contact with an outgroup member improves attitudes towards the outgroup as a whole (e.g., Hewstone & Swart, 2011; Pettigrew, 1997; Pettigrew & Tropp, 2006). The observed results, moreover, confirm previous cross-sectional (e.g., Pettigrew, 1997; van Dick et al., 2004; Wagner, van Dick, Pettigrew, & Christ, 2003), meta-analytic (e.g., Pettigrew & Tropp, 2006), and longitudinal (e.g., Levin et al., 2003; Swart et al., 2011) findings, that positive intergroup encounters can reduce prejudice. These primary contact effects, while not the central focus of the present study, are an important and necessary precondition for the STE, in that positive attitudes first need to generalise from the outgroup exemplar to the outgroup as a whole (i.e., primary

contact effect) before generalisation to a secondary outgroup as a whole can occur (i.e., the STE; Pettigrew, 2009).

After revealing that the positive effects of contact are able to generalise from the primary outgroup exemplar to the outgroup as a whole, it was further observed that these positive effects indeed generalised to the respective outgroup uninvolved in the contact situation, even after controlling for prior contact with this outgroup. More specifically, in the primary outgroup model, positive attitudes towards black (African) South Africans significantly reduced social distance towards coloured South Africans in general, even after controlling for prior contact with coloured South Africans. Likewise, in the secondary outgroup model, positive attitudes towards coloured South Africans significantly reduced social distance towards black (African) South Africans in general, even while controlling for prior contact with black (African) South Africans.

A noteworthy point here, is that the data were able to disconfirm three potential alternative explanations for the STE, namely secondary outgroup contact effects (also termed ‘the secondary contact problem’), socially desirable responding (see Tausch et al., 2010, Study 3), as well as shared method variance. Firstly, in the primary outgroup model, the present study specifically aimed to control for the potential influence of prior contact with secondary outgroup (i.e., coloured South Africans). The present study was able to do so by allowing general contact with coloured South Africans to covary with (to be fixed on the same level as) cross-group friendships with black (African) South Africans. Similarly, in the secondary outgroup model, I controlled for prior contact with black (African) South Africans by allowing general contact with this group to be fixed on the same level as cross-group friendships with coloured South Africans. As such, the STE occurred in spite of the possible influence of prior contact with the other outgroup, which effectively rules out the secondary contact problem as a potential alternative explanation for the STEs that were observed in the present study, thereby offering robust support for Pettigrew’s (1997) generalisation hypothesis (see also Pettigrew, 2009).

A second potential alternative explanation for the occurrence of the STE is that the positive relationship between primary outgroup contact and secondary outgroup attitudes (or vice versa) could also be due to the fact that people who tend to respond in socially desirable ways may report both more contact and more positive outgroup attitudes (also termed ‘the social desirability problem’; see Pettigrew, 1997; Tausch et al., 2010, Study 3). Upon closer inspection of the mean scores for each of the main predictor variables (cross-group friendships and general contact) and outcome variables (positive attitudes and social distance)

in both the primary and secondary outgroup models, one can observe that respondents did not report either very high or very low scores on either of these measures, suggesting no ceiling or floor effects. This argues against the possibility that respondents responded in a socially desirable way.

A third potential alternative explanation was also ruled out, that of shared method variance. As previously mentioned, shared method variance poses the risk of artificially inflating the relationships between variables under consideration due to common sources of variance underlying the use of identical measurement instruments (Podsakoff et al., 2003). In order to rule out the possibility of this occurring, the present study used different scales to measure intergroup contact with the primary and secondary outgroups. In both the primary and secondary outgroup models, the STE occurred even with different latent variables being used to measure contact (general contact and cross-group friendships) and prejudice (positive outgroup attitudes and social distance). Once again, it is worth noting that using different attitude measures (i.e., swapping the attitude measures) yielded the same results.

Furthermore, the present findings suggest that cross-group friendships may indeed be important in bringing about improved intergroup relations and intergroup understanding within the South African context (see also Swart et al., 2010). Since cross-group friendships with each of the two outgroups significantly predicted greater perspective-taking and improved attitudes towards the same outgroup in question, and moreover generalised to the uninvolved outgroup respectively, these findings leave little doubt that cross-group friendships are a potent form of intergroup contact. Moreover, it is precisely these cross-group friendships that also provide a context in which many of Allport's (1954) optimal conditions (i.e., equal status contact, common interests/goals, cooperation, and friendship potential) can be met, and which Pettigrew (1997) states leads ingroup members to realize that the ingroup is not the only yardstick by which to judge the social world. The present findings are thus in line with previous research emphasising the importance of such friendships to promote intergroup harmony (e.g., Mendoza-Denton & Page-Gould, 2008; Page-Gould et al., 2008; Pettigrew, 1997, 1998; Pettigrew & Tropp, 2006; Swart et al., 2010).

Importantly, recall from Chapter four that I kept the *a priori* designation of black (African) South Africans as the primary outgroup, and coloured South Africans as the secondary outgroup, despite preliminary analyses indicating significantly more intergroup contact and cross-group friendships with coloured South Africans (my reasoning based on the diversity profile of Stellenbosch University's undergraduate student population). The fact that the STE occurred in the primary outgroup model, in spite of the respondents indicating

significantly less general contact and cross-group friendships with black (African) South Africans (while controlling for prior contact with coloured South Africans), provides even stronger support for the STE observed in the primary outgroup model. Indeed, these findings suggest that cross-group friendships with even just a few outgroup members (even if they are members of an outgroup with whom one might have significantly less intergroup contact in general) might lead to a reduction in prejudice toward that particular outgroup as well as a range of other outgroups not involved in the original encounter. This could be significantly advantageous within diverse, post-conflict societies such as South Africa, characterised for the most part by limited intergroup interaction (Durrheim & Dixon, 2010).

As such, together with other South African findings (e.g., De Beer, 2015; Swart et al., 2010; Tredoux & Finchilescu, 2010), the present study reiterates the importance of multicultural educational environments in South African as a means for providing individuals from largely ethnically homogeneous communities (such as many students at Stellenbosch University) with the opportunity for engaging in positive contact with outgroup members. It follows that contact interventions that aim to improve attitudes towards different outgroups at Stellenbosch University and in South Africa in general, should be structured in order to facilitate *high-quality* intergroup encounters with friendship potential. This should preferably be done in such a manner as to promote more positive attitudes towards the outgroup by incorporating Allport's (1954) optimal conditions in the contact setting. Specifically, the contact situation should be arranged such that it facilitates self-disclosure, whereby respondents would be able to uncover shared interests and possibly develop friendships. In addition, the contact experience should require cooperation between groups, and these groups should ideally share equal status. Finally, such contact situations should be sanctioned by Stellenbosch University, thereby providing Institutional support.

### **Mediators of the STE**

The present study substantiates the recently advanced notion of the STE of contact (Pettigrew, 1997, 2009), whereby engaging in positive contact with one outgroup exerts not only positive effects on primary outgroup attitudes, but also positively affects secondary outgroup attitudes (Schmid et al., 2014). After revealing that the positive effects of contact are able to generalise from the primary outgroup exemplar to the outgroup as a whole, it was further observed that these positive effects indeed generalised to the secondary outgroups uninvolved in the contact situation (i.e., the STE), even after controlling for prior contact with the secondary outgroup at hand. The most robust support for this effect was observed in the

primary outgroup model, where cross-group friendships with black (African) South Africans (the outgroup with whom respondents reported significantly less contact) improved attitudes towards black (Africans) in general, as well as towards the secondary outgroup in the present study, namely coloured South Africans. At the core of the present study, lies the notion of understanding precisely how this generalisation occurs (i.e., the processes that mediate the STE; Baron & Kenny, 1986). To this end, the present study explored two affective mechanisms, namely attitude generalisation and empathy generalisation. While attitude generalisation received full support in both the primary and secondary outgroup models, empathy generalisation received mixed support. Nonetheless, the present study supports Pettigrew's (2009) assertion that the STE might largely involve affective components (see also Eller & Abrams, 2004; Van Laar et al., 2005).

As previously mentioned, prior research on the secondary transfer effect has received criticism regarding the possibility of shared method variance (see Podsakoff et al., 2003). In order to rule out this possibility in the present study, different scales were used to measure intergroup contact, empathy, and prejudice towards the primary and secondary outgroups in both models. In the primary outgroup model, in line with my hypotheses, the STE occurred via both attitude and empathy generalisation even with different latent variables being used to measure contact (contact quantity and cross-group friendships), prejudice (positive outgroup attitudes and social distance), as well as empathy (perspective-taking and affective empathy) for each of the two outgroups. Identical latent variables were used to predict the relationships in the secondary outgroup model, and the STE occurred via attitude generalisation, but empathy generalisation failed to reach significance (this is discussed in more detail below).

Notwithstanding, it remains plausible to argue that the STEs that were observed in the present study are unlikely to be the results of spuriously inflated relationships between the variables in question. This methodology therefore significantly adds to the current conversation that is taking place in the STE literature, particularly since most STE research has relied on using identical measures to assess the same constructs for the primary and the secondary outgroup (Al Ramiah, 2009; Harwood et al., 2011; Lolliot et al., 2013; Swart, 2008; Tausch et al., 2010; for exceptions see De Beer, 2015; Pettigrew, 2009). The present study moreover extends previous work on attitude and empathy generalisation as mediators of the STE (e.g., De Beer, 2015) most notably by its use of a more powerful and sophisticated statistical analytical procedure (SEM). This is advantageous in that SEM, by default, models error variance for dependent variables that is unexplained by the latent variable, that is, variability not due to the true score (i.e., indicator error; Nachtigall, Kroehne, Funke, &

Steyer, 2003; Weston & Gore, 2006). In other words, the accuracy with which the parameters are estimated is greatly improved for both direct and indirect paths, making the present findings far more reliable. In the section below, I will discuss the findings relating to attitude generalisation as one of the underlying mechanisms involved in the STE.

### **The Generalisation of Outgroup Attitudes**

The findings observed in the present study supported the attitude generalisation hypothesis of the STE (i.e., that encouraging more positive attitudes towards the primary outgroup predicts a reduced desire for social distance with the secondary outgroup and vice versa). More specifically, results for the primary outgroup model showed that cross-group friendships with black (African) South Africans not only significantly improved attitudes towards black (African) South Africans in general, but also towards coloured South Africans in general (via a reduction in social distance); clearly demonstrating attitude generalisation. Evidence for the STE via attitude generalisation is further confirmed by the test of the secondary outgroup model, which followed a similar pattern, namely that cross-group friendships with coloured South Africans significantly improved attitudes towards coloured South Africans in general, which in turn predicted reduced social distance towards black (African) South Africans in general.

Essentially, this means that interacting with one's cross-group friends not only promotes more positive attitudes toward that friend and the outgroup the friend belongs to, but this also reduces the desire to remain socially distant from other outgroups that one has more limited intergroup contact with. This broad effect of intergroup contact could have a significant benefit in reducing prejudice between different groups, especially in diverse societies such as South Africa. In line with prior cross-sectional research exploring attitude generalisation as a mediator of the STE (e.g., Al Ramiah, 2009; De Beer, 2015; Harwood et al., 2011; Lolliot et al., 2011; Pettigrew, 2009; Swart, 2008), as well as large scale STE data sets from multiple European countries (e.g., Schmid et al., 2012; Tausch et al., 2010, Studies 1-3), these findings underline, again, the centrality of attitude generalisation as one of the most prominent processes underlying the STE (Lolliot et al., 2013).

Moderation hypotheses seem to be important to the STE as they help to explain (a) when we may see the generalisation of outgroup attitudes across groups and (b) when stronger or weaker STEs may occur (Lolliot et al., 2013). Speaking to the first point, Pettigrew (2009) considered similarity gradients (i.e., perceived outgroup similarity) as primary moderator of attitude generalisation (see also Lolliot et al., 2013). Evidence has



started accruing to this effect, showing that attitudes towards a primary outgroup are more likely to generalise to secondary outgroups when these groups are perceived to be sufficiently similar to one another. At this point, Goffman's (1963) typology of social stigma, which characterises social sigma as falling into either *category stigma* (e.g., devalued ethnic, or religious groups), *physical stigma* (e.g., physically handicapped groups) and *character stigma* (e.g., homosexuals, homeless, drug-addicts), may be useful in explaining this phenomenon. Within the context of South Africa, where a history of socio-political oppression is shared amongst black (African) and Indian South Africans under the apartheid state, it seems rather plausible that the attitude generalisation observed in the present study, may to a certain extent, be driven by perceptions of Goffman's (1963) category stigma, where black (African) and coloured South Africans are considered to be a part of the same 'category' as it were. Unfortunately, this explanation remains speculative since the present study did not include a measure of perceived outgroup similarity to provide a test for the similarity gradient hypothesis. Notwithstanding, the present findings resemble those of Swart (2008), who found amongst white South African high school students, that cross-group friendships with black (African) South Africans improved attitudes towards black (African) South Africans, which in turn, improved attitudes towards coloured South Africans in general (after controlling for cross-group friendships with coloured South Africans in general). Swart's (2008) second model also found support for the STE whereby contact with black (African) South Africans improved attitudes towards coloured South Africans via improved attitudes towards black (African) South Africans (after controlling for cross-group friendships with coloured South Africans).

Given the growing need for effective strategies to promote intergroup harmony in diverse societies such as South Africa, including groups varying in ethnicity, religion, social status, sexual orientation, and multiple other forms of stigmatised identity, the potential implications of the present findings and research on STEs more generally, are thus wide reaching. Intergroup contact is one strategy that consistently yields positive effects (see Hewstone, 2009). Of course, as we know, intergroup contact with a wide range of groups is not a realistic possibility for everyone, especially in a context still plagued by the consequences of legalised ethnic segregation. The present findings therefore underscore the importance of emphasising and prioritising positive, face-to-face encounters between young South Africans from various groups, albeit initially through extended contact, which has proven to be another effective strategy in fostering intergroup harmony (see Openshaw, 2015 for the most recent findings). We have seen that it is precisely such encounters that are able to



bring about improved attitudes as Allport (1954) originally postulated, even to groups uninvolved in the contact situation as we have later come to see (Lolliot et al., 2013). Below, I continue with a discussion on the underlying mechanisms of the STE, but with the focus now directed towards empathy as a powerful mediator of this effect.

### **The Generalisation of Outgroup Empathetic Responding**

From the previous section on the attitude generalisation hypothesis, we know that attitudes towards an encountered outgroup generalise to other outgroups not involved in the contact situation. Therefore, empathy may influence attitudes towards secondary outgroups via attitudes towards the primary outgroup, with empathy itself being influenced by intergroup contact (i.e., mediation effect; Lolliot et al., 2013). Confirming empathy generalisation as a mediator of the STE, the results of the present study in both the primary and secondary outgroup models showed that empathy mediated the contact-prejudice firstly, by having a significant negative association with social distance via greater affective empathy, and secondly, by improving attitudes via greater perspective-taking. These two pathways in the present study through which empathy acts as a mediator in the relationship between contact and reduced prejudice, are in line with previous findings to this effect via perspective-taking (e.g., Aberson & Haag, 2007), affective empathy (e.g., Swart et al., 2010, 2011), as well as the simultaneous testing of both (e.g., De Beer, 2015). Thus, conceiving of increased perspective-taking as a process that explains, in part, how intergroup contact may also be beneficial for intergroup attitudes, the present findings contribute to the limited available research in the contact literature on the role of empathy as a mediator of the primary effects of intergroup contact (Pettigrew & Tropp, 2008).

Beyond looking at empathy as a mediator of the primary contact effects, the present study was particularly interested in whether empathy generalisation mediates the STE. Both of the possible pathways through which empathy might mediate the STE (proposed by Lolliot et al., 2013) were tested in the present study. Recall from the discussion in Chapter three that, extending the attitude generalisation hypothesis, the first of the two pathways represents what is termed *empathy generalisation*. That is, empathy influences attitudes towards the secondary outgroup via the mediation of attitudes towards the primary outgroup. The present study offered full support for this predicted pathway in both models: in the primary outgroup model, cross-group friendships with black (African) South Africans at Stellenbosch University indirectly reduced social distance towards coloured South Africans via greater perspective-taking and improved attitudes toward black (African) South Africans in general.

Similarly, in the secondary outgroup model, cross-group friendships with coloured South Africans at Stellenbosch University indirectly reduced social distance towards black (African) South Africans via greater perspective-taking and improved attitudes toward coloured South Africans in general.

The second pathway describes the *full* empathy generalisation hypothesis, as suggested by Lolliot and colleagues (2013; offering a stricter test of the empathy generalisation hypothesis). In this pathway, contact with a primary outgroup leads to greater empathy towards the primary outgroup, which in turn increases empathy towards the secondary outgroup, stimulating improved attitudes towards the secondary outgroup. This second pathway was tested in the present study with two further, related objectives in mind. Firstly, I specifically wanted to eliminate, as far as possible, the potential influence of shared method variance on the relationships between the variables underlying the STE. As previously mentioned, the present study accounted for this by including two different measures of the empathetic response, namely perspective-taking (i.e., the cognitive dimension) and affective empathy (i.e., the affective dimension). Secondly, the present study explicitly wanted to test the relationship between these two forms of empathy as described by Batson et al. (1997). Recall from Chapter three that the three-step model proposed by Batson and colleagues (1997) suggests perspective-taking precedes affective empathetic responding. Batson et al. (1997) moreover advise that in order to establish a ‘causal’ order between these two variables, one should arrange them such that perspective-taking predicts affective empathy. Accordingly, the present study purposefully specified perspective-taking as a predictor of affective empathy in both the primary and secondary outgroup models.

The primary outgroup model supported the full empathy generalisation hypothesis as described by the second pathway. Specifically, cross-group friendships with black (African) South African students at Stellenbosch University were positively and significantly associated with greater perspective-taking towards black (African) South African in general, which in turn, significantly predicted greater empathy towards coloured South Africans in general (controlling for general contact with coloured South Africans). This, in turn, significantly reduced social distance towards coloured South Africans (controlling for general contact with coloured South Africans). These findings are consistent with the most recent evidence for full empathy generalisation (e.g., De Beer, 2015), which showed that cross-group friendships with coloured South Africans were positively and significantly associated with greater perspective-taking towards coloured South Africans in general, which also

significantly predicted greater affective empathy and a reduction in social distance towards black (African) South Africans in general.

The abovementioned findings are noteworthy for three reasons. Firstly, the full empathy generalisation hypothesis was strongly supported while controlling for prior contact with the secondary outgroup. As such, these findings cannot be explained as being a derivative of secondary outgroup contact. Secondly, the use of two, very different measures of intergroup contact, empathy, and prejudice eliminates the possibility that the pattern of relationships observed in the present study is as a result of shared method variance. Thirdly, the present findings are consistent with Batson et al.'s (1997) hypothesis that perspective-taking precedes affective empathetic responding. To date, the only prior research that has specifically explored this 'causal' sequencing between these two empathy variables in the context of the STE, is De Beer's (2015) study on attitude and empathy generalisation, which provided evidence to support Batson et al.'s (1997) hypothesis. Notwithstanding the validity of De Beer's (2015) findings and those of the present study, the cross-sectional nature of both research designs are not sufficient to warrant causal inferences. As such, I urge caution when interpreting both sets of findings.

In contrast to the primary outgroup model, however, the secondary outgroup model failed to support the full empathy generalisation hypothesis, and consequently did not provide evidence for Batson et al.'s (1997) hypothesis. Specifically, cross-group friendships with coloured South African students at Stellenbosch University were positively and significantly associated with greater perspective-taking towards coloured South Africans in general, but unfortunately, this did not predict greater affective empathy towards black (African) South Africans in general (while controlling for general contact with black (African) South Africans, but rather, generated a negative, non-significant relationship. Evidence for full empathy mediation of the secondary outgroup model was therefore not obtained, and in fact, yielded contradictory results. Thus, while empathy emerged as a significant mediator for both pathways in the primary outgroup model, the secondary outgroup model was only able to confirm empathy generalisation via the first pathway, and failed to confirm an STE via the second, stricter pathway. This, I suspect, could be due to a variety of factors, some of which I consider below.

The differences in the amounts of variance explained across both models are not pronounced, and neither are differences in the rest of the functional relationships; specifically, recall from Chapter four, the models differ only in the path from perspective-taking to affective empathy. It is difficult to gauge to what extent this discrepancy in findings

between the two models could be attributed to the functional relationships, and whether it is a matter of differences in perceptions of/feelings toward the outgroups involved: white South Africans were able to put themselves in the position of black (African) South Africans and to see the world through their eyes (perspective-taking; Lolliot et al., 2013), and were consequently better able to empathise with and have compassion toward coloured South Africans (affective empathetic responding). However, the reverse did not hold in the present study: white South Africans were able to put themselves in the position of coloured South Africans, but this in turn, did not predict affective empathy towards black (African) South Africans.

As with the attitude generalisation hypothesis, similarity gradients may help to uncover stronger attitude generalisation effects from primary outgroup empathy to secondary outgroup attitudes. Batson et al. (1997) hypothesised that the positive effects of empathy will generalise from a single outgroup member to the outgroup as a whole if the person's outgroup membership is considered sufficiently salient (Lolliot et al., 2013). Therefore, the positive effects of empathy should generalise to secondary outgroups if the secondary outgroup is understood to suffer a similar type of discrimination as the primary outgroup (Lolliot et al., 2013), and of course, the reverse should arguably hold too. Similarly, the *amount* or *level* of stigma may moderate the relationship between a mediator (such as primary outgroup empathy), and secondary outgroup attitudes. For instance, if both black (African) and coloured South Africans are seen to be experiencing similar levels of discrimination (i.e., two outgroups may experience different *types* of discrimination, but if the respondent perceives them as both experiencing high *levels* of their respective discrimination; Lolliot et al., 2013), then the positive effects of contact may generalise from the primary outgroup to the secondary outgroup, and, as the logic of secondary STE model goes, from the secondary outgroup to the primary outgroup.

However, in South Africa, a country marked by deep and overlapping divides between white and black, affluent and poor, highly educated and low skilled, suburbs and townships, we accept there is a social hierarchy, where black (African) South Africans occupy the lowest social and economic status, with coloured South Africans being slightly better off than them. Indeed, Seekings (2003) confirms that the core and marginal (lowest) working classes of South African are overwhelmingly African (over 70%), with coloured South Africans occupying a smaller proportion of these deciles (over 40%; see also Burger, Steenkamp, Van Der Berg, & Zoch, 2014). Therefore, although speculative, it is possible that the present findings may arise because coloured South Africans at Stellenbosch University

are perceived by white South African students to occupy a relative socioeconomic majority status in comparison to black (African) South Africans at Stellenbosch University. Coloured South Africans may be a relative majority-status group in comparison to black (African) South Africans in this context, however, it is possible that the perception amongst white South Africans (the socio-economic majority at Stellenbosch University) of black (African) South Africans having a devalued socioeconomic status relative to coloured South Africans, could influence the extent to which empathetic responding mediates the secondary outgroup STE.

It follows that if you are able to see the world through the eyes of those that are believed to struggle the most (i.e., black (African) South Africans), perhaps it is then easier to also have empathy for those that struggle slightly less (i.e., coloured South Africans; since your cognitive empathetic response has been so strongly triggered for the most struggling group that you are now sensitive to any group struggling). However, if you are able to see the world through the eyes of a group that is *not* considered to be struggling the most (i.e., coloured South Africans), perhaps it does not trigger your cognitive empathetic response enough to trigger affective empathy for a group that struggles even more (i.e., black (African) South Africans; since you have not been sufficiently sensitised to ‘group struggle’ by taking perspective for a group that is struggling in a context where other groups may be struggling more). Whether this is the case remains an important avenue for future research, especially in a society where white South Africans continue to benefit from the historical advantages of their majority-group status (see also Christ et al., 2014).

Another possibility is that these findings are confirming what might be termed a differential activation, or situational pattern, of empathetic responding towards specific outgroups and not to others (i.e., full empathy mediation as observed with black (African) South Africans, but not with coloured South Africans). In other words, it is possible that perspective-taking may be target-specific, rather than activating a more generalised helping mind-set towards a variety of outgroups (see Galinsky, Ku, & Wang, 2005; Galinsky & Moskowitz, 2000; Vescio, Sechrist, Paolucci, 2003). Indeed, replicating Batson et al.’s (1997) findings, Vescio et al. (2003) found that empathy played a mediational role in the relationship between perspective-taking and intergroup attitudes. However, whereas Batson and colleagues (1997) found that empathy accounted for over 90% of the relationship between perspective-taking and attitudes toward stigmatised outgroups (e.g. people with AIDS, the homeless, murderers), Vescio et al. (2003) found that empathy was only a marginally significant partial mediator. Importantly, the present study differed from the

Batson et al. (1997) research in terms of the target stimulus group selected. Batson et al. (1997) presented participants with individuals who belonged to stigmatised social groups (e.g., woman with AIDS, homeless man, murderer), whereas the present study explored the extent to which participants adopted the perspective of, and empathised with, ethnic outgroup members (i.e., a black (African) and coloured South African students). The findings of the present study are therefore not out of the ordinary, and signify that there may be other, individual and/or situational variables at play.

Speaking to this point, Davis, Conklin, Smith, and Luce (1996) and Galinsky and Moskowitz (2000) have both suggested that there are two separate processes involved in perspective-taking: a conscious, explicit effect, and a non-conscious, implicit effect. Feelings of sympathy and increased liking are intended, conscious, explicit effects of perspective-taking. However, during perspective-taking, the self-concept is also implicitly activated and applied toward the target (Galinsky et al., 2005). Hence, there is a merging of the self and others, otherwise termed a ‘self-other overlap’ that occurs (Davis et al., 1996). As such, I tend to agree with Galinsky et al. (2005) who contend that although perspective-taking assists in the formation and maintenance of specific social bonds, it does not activate a general helping mind-set, and therefore, is not a solution for reducing all intergroup bias. This explains, at least in part, why increased perspective-taking towards coloured South Africans observed in the present study might have failed to generalise to affective empathetic responding towards black (African) South Africans. This moreover suggests that interventions aimed at reducing prejudice towards various outgroups should be structured to increase *positive affect* (i.e., positive feelings and emotions) rather than being focused on only addressing the negative cognitive representations and beliefs that an individual holds about a specific outgroup (i.e., the cognitive component of prejudice; Pettigrew & Tropp, 2008).

Taken together, the results of the present study in terms of empathy generalisation are mixed. One of the most prevalent concerns relating to empathy, however, is the nature and history of intergroup relations, as inducing empathy for an outgroup may prove difficult in contexts that are characterised by a history of conflict, such as South Africa. Furthermore, intergroup relations that are characterised by extreme levels of intergroup violence may induce a negative empathic response, such as pleasure in the outgroup member’s misfortune (see also work on intergroup *schadenfreude*; Spears & Leach, 2004). Bearing in mind that the current political atmosphere at Stellenbosch University and other universities across South Africa is overwrought with heightened awareness of socio-economic and political discrepancies between the ethnic groups (which arguably still seems to be rooted in feelings



derived from the apartheid era), it is conceivable that empathetic responding amongst South Africans in general might be rigged with unease towards a variety of outgroups. Despite the present lack of clarity, empathy remains a potentially powerful mediator of the effects of intergroup contact on outgroup attitudes (Lolliot et al., 2013), with the full extent of its effects still to be rigorously tested. In addition, despite its potential drawbacks, I argue that perspective-taking remains a useful tool for forming and supporting specific social bonds, even though it may not be capable of generalisation across groups to the same extent as affective empathy appears to be. Therefore, it remains for future research to disentangle these effects.

Understanding when and how positive effects of encountering only one outgroup may generalise to (i.e., exert STEs towards) secondary unrelated outgroups, holds particular merit for the promotion of intergroup harmony (see also Schmid et al., 2012). In light of the mixed findings on the full empathy generalisation hypothesis, the present study highlights the notion that STEs, via the mechanism of empathetic responding, may not yet be fully generalisable to the variety of outgroups that comprise multicultural South African society. Nevertheless, the present findings provide evidence that the STE may stimulate different *levels* of cognitive empathetic responding towards certain outgroups, and that these may not necessarily inspire the subsequent affective empathetic responding as Batson and colleagues (1997) originally proposed. I therefore argue that situational attributions might have exerted a greater influence in the present context than expected.

As Pettigrew (1997) noted, regardless of the approach that has been taken, it can generally be assumed that if stereotypic perceptions of outgroups are reduced, then more favourable intergroup attitudes will follow. A suggestion in this regard would be to not only encourage positive intergroup contact on a micro level, in the case of those people who experience direct positive contact with members of the outgroup, but moreover to improve positive intergroup contact on a macro scale, offering increased support in the form of mixed schools, universities, neighbourhoods, and workplaces. This is important because people are influenced by their stereotypic representations of outgroups. This holds particular merit in post-apartheid South Africa, which, unfortunately, still remains largely segregated and ethnically homogenised. In addition, interventions aimed at restoring the previous injustices of South Africa's past, should focus on reconstructing what might be false perceptions of outgroups. This should in effect generalise to other, similar outgroups, thereby enhancing the widespread effect of positive intergroup contact as a means for achieving long-term, positive social change.



### **Limitations of the Present Study**

Notwithstanding the significant contributions of the present study to understanding the secondary transfer effect of intergroup contact, particularly within the South African context, there are three limitations that should be noted. Firstly, one of the most concerning threats to the validity of the present study, is that of research design. Much like the vast majority of the research investigating the STE (for exceptions see Eller & Abrams, 2004; Tausch et al., 2010), the findings reported in the present study have relied on cross-sectional data. More confident, albeit not unequivocal, conclusions about the directionality of relationships can only be made when using experimental, or longitudinal, data, which allows for the computation of cross-lagged effects to test the hypothesised relationships. I have thus relied heavily on the theoretical and practical plausibility of the hypothesised set of relationships (e.g., Batson et al., 1997), as well as on previous research in this area (e.g., De Beer, 2015; see also Lolliot et al., 2013) in testing the hypothesised relationships in the present study. Nevertheless, the present results are still valuable and contribute methodologically to the most recent cross-sectional work of this kind (e.g., De Beer, 2015) most notably by using a more powerful and sophisticated form of statistical analysis (SEM). Viewed in this light, the present findings are all the more encouraging, as the hypothesised mediating mechanisms underlying the primary outgroup model were robustly tested and reported to be significant.

Secondly, these results should, of course, not be generalised beyond the present research setting. In particular, the results may well not generalise beyond (a) the sample of respondents, which included 866 white students (out of more than 10,000 prospective respondents) at Stellenbosch University, (b) beyond the primary-secondary outgroup combinations tested in the present study, and (c) over time, since the cross-sectional nature of the present study is not suited for drawing longitudinal inferences of any kind. I therefore urge caution when interpreting the present findings, as it is not clear whether the differences observed in terms of attitude generalisation (observed in both models) and full empathy mediation (observed in the primary outgroup model) accurately reflect the disposition of the white undergraduate population at Stellenbosch University, or if the pattern of results would also be found for white South Africans from the general population (i.e., non-university students).

The final limitation I wish to highlight relates to measures omitted from the present study. The present study did not include a number of potentially moderating or mediating

variables that might have contributed towards a better understanding of the pattern of findings observed. For instance, perceived outgroup variability is one of the moderating variables that might have been key to understanding the difference in the full empathy mediation between the original and the reverse STE models I tested. The present study is therefore unable to speculate whether attitude and empathy generalisation effects are perhaps moderated by greater perceived similarity of the outgroups or not. In addition, three potential mediators of the STE, namely deprovincialisation, intergroup anxiety, and perceived outgroup threat (see Stephan & Stephan, 2000), were also omitted from the present study. Each of these measures were considered for inclusion in the present study, however, due to the risk of participant attrition, these measures were omitted to ensure the brevity of the data collection procedure. Before closing, several points of relevance for future research and theoretical developments in contact theory are presented below.

### **Directions for Future Research**

While numerous avenues for future research are suggested by the results of the present study, I highlight a few that I consider most pressing in light of the current conversation on the STE. Firstly, echoing Pettigrew's (2008) call for more longitudinal studies testing contact theory in general, longitudinal designs are needed to more thoroughly investigate the STE. Moreover, those longitudinal designs that have provided evidence for the STE (Eller & Abrams, 2004; Pettigrew, 2009; Tausch et al., 2010), have relied on two waves of data (with the exception of Van Laar et al., 2005), and are thus lacking in the rigour needed to test longitudinal mediation. I therefore strongly recommend the use of at least three-wave longitudinal data sets for future research on STEs, particularly to test the full empathy generalisation hypothesis (with primary outgroup attitudes measured from wave one to wave two, followed by the effect of the mediators on the outcome variables from wave two to wave three). In so doing, future research would be testing the temporal relationship between the mediating variables underlying the STE – a novel avenue for future studies.

Notwithstanding the rigour of longitudinal designs, they do not provide a strict enough test for causal hypotheses (Cliff, 1983). Therefore, in agreement with Lolliot et al. (2013), my second suggestion is that future research should utilise experimental designs to test the STE. The manipulation of contact conditions in experimental designs lends far more confidence to causal inferences, especially when wanting to rule out alternative explanations for the occurrence of the STE. The most recent longitudinal experimental study of the STE (e.g., Openshaw, 2015) experimentally manipulated direct and extended contact across three

waves, which thereby significantly advances the limited number of experimental designs testing the STE (e.g., Galinsky & Moskowitz, 2000; Harwood et al., 2011), neither of which managed to manipulate direct contact. The relative lack of experimental studies exploring the STE deserves attention.

Thirdly, in addressing methodological concerns of the present study (design, sample, and measures), results need to be replicated by (a) using longitudinal and experimental data sets to better test the hypothesised relations, (b) using randomised sampling in order to enhance the generalisability of the results, (c) testing these relationships amongst white students from other universities across South Africa, as well as from the general population, and (d) including various measures that were not included in the present study that have been shown to have an influence on the outcome variables in question. Related to the last point, the present study made use of direct contact measures to assess the contact-prejudice relationship, but it would also be interesting to see the effect of indirect contact, such as extended, parasocial, or imagined contact (see Harwood et al., 2011; Openshaw, 2015; Vezzali et al., 2014) on the processes of attitude and empathy generalisation as they occur in the STE. While the STE might not be as pronounced without direct contact measures, in light of the current political atmosphere in South Africa (to which Stellenbosch University is no exception), indirect forms of contact remain one of the most likely ways of facilitating positive intergroup contact effects when there is a lack of direct contact opportunities, and/or when individuals avoid making use of intergroup contact opportunities as they present themselves.

Given the current state of the research literature, there is little need to demonstrate further contact's general ability to lessen prejudice towards a variety of outgroups, but the focus needs rather to be on isolating factors that may facilitate or impede its generalisation. As such, a few theoretical avenues are worth noting. Firstly, future research should investigate those factors that contribute to negative contact experiences that possibly lead individuals to avoid contact with outgroups. These include among others, intergroup anxiety, negative direct contact, outcome expectancies, fear of being perceived as prejudiced or of being the target of prejudice, as well as personality factors (i.e., introversion). The converse also applies, where factors that are likely to facilitate individuals' engagement in intergroup contact need further attention (including positive direct contact experiences, shared interests, outgroup trust, institutional support, prosocial norms, and extraversion).

Secondly, underscoring Openshaw's (2015) assertion, future studies should focus on testing the STE for different group combinations in South Africa, including, for example,

minority STEs (e.g., coloured respondents (minority group) interacting with black (African) South Africans (primary outgroup) and their attitudes towards Indian/Asian South Africans (secondary outgroup)). Of course, this would require assessing perceived outgroup similarity (i.e., similarity gradients), as these groups may appear to be similar at face value, and indeed may share a socio-political history of oppression, yet they may not be considered similar in through a cultural lens. The potential mediating effects of social identity complexity (recently explored by Schmid et al., 2014) alongside ingroup identification would be interesting to measure in this regard. The use of various outcome variables, such as outgroup trust and positive/negative action tendencies, for example, would prove another useful venture.

As described above, the lack of clarity in the present study on the full empathy generalisation hypothesis warrants a better understanding of perspective-taking's effect on cognitive structures. Such insights may help understanding perspective-taking's well-documented effect in the STE as well as other areas including attributional judgments (e.g., Regan & Totten, 1975) and helping behaviour (e.g., Davis, 1983; Davis et al., 1996). Evidence that the STE may stimulate different *levels* of cognitive empathetic responding towards certain outgroups, remains another pressing matter for STE researchers to explore, as well as taking into account situational variables that might be at play (e.g., the 'self-other overlap'; Davis et al., 1996). In addition, having received mixed support thus far, the deprovincialisation hypothesis (Pettigrew, 1997) warrants special attention in future STE work. Operationalising deprovincialisation as multiculturalism or social identity complexity may prove to be especially fruitful as a mediator of the STE (Lolliot et al., 2013). Finally, as previously mentioned, the STE depends largely on affective factors (e.g., Pettigrew, 2009), with one of the most powerful mediators being intergroup anxiety. As such, future research should pay attention to anxiety generalisation as another key mechanism underlying the STE.

## Conclusions

To conclude, the present study makes an important contribution toward contact theory, specifically to our understanding of the complex underlying processes driving the secondary transfer effect (STE). The present study expands on previous work in the area of attitude and empathy generalisation as mediators of the STE, and, given the paucity of work exploring these effects in South Africa, provides valuable information most notably for shaping intergroup contact interventions aimed at improving the intergroup climate in post-apartheid South Africa. The use of SEM to analyse the data allowed more robust inferences

to be drawn regarding the patterns of relationships found than previous work of this kind (e.g., De Beer, 2015).

The present findings confirm that cross-group friendships are an especially valuable means for reducing intergroup prejudice and promoting more positive attitudes towards a variety of outgroups. Importantly, the present study demonstrated that positive, high-quality contact with even a less-encountered outgroup, is sufficient to generate positive attitudes towards other outgroups not involved in the contact situation. Notwithstanding the validity of these findings, the present study highlights that the generalisation of outgroup empathetic responding is arguably more difficult to achieve than positive outgroup attitudes, even in light of having experienced direct (positive), face-to-face intergroup contact. Such results are likely the effects of a myriad of situational variables, including the possibility of empathetic responding being more target-specific than originally thought. It is the task of future research to uncover other potential confounding variables that may hinder the full extent of STEs. While Batson et al.'s (1997) three-step model of empathy generalisation was used to investigate the STE, the present findings provide only partial support for this hypothesis, with more research needed to confirm its validity in different settings, using a variety of outcome variables.

One cannot ignore that the nature and history of intergroup relations in South Africa, characterised by a history of intergroup conflict, may prove a difficult context for inducing outgroup empathy in general. Indeed, the post-apartheid South African context might be a more suitable platform for testing other affective mechanisms, such as anxiety generalisation. The present research thereby opens up interesting avenues for future research, emphasising the need to expand current theorising on STEs, and moreover, that interventions aimed at reducing prejudice towards various outgroups should be structured to increase positive affect, over-and-above the promotion of positive outgroup attitudes. Taken together, the present findings support the value of positive (high-quality) intergroup contact as a powerful strategy for reducing intergroup prejudice via both attitude and empathy generalisation, and hold important implications for the promotion of a more tolerant, harmonious South African society.

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**APPENDIX A****ELECTRONIC SURVEY INVITATION**

Dear Student

You are invited to participate in a short survey being run by Dr Hermann Swart, Department of Psychology, Stellenbosch University. It explores the social experiences and opinions of students studying at Stellenbosch University (Research Ethics Number: HS1051/2014), and will take approximately thirty minutes to complete.

Your participation in this survey is completely confidential and anonymous. Students who submit a completed survey will be entered into a cash prize draw to the value of R1,000.00. Please click on the link below for further information on the survey and to access the survey itself.

\*\*\*\*\*

*Geagte Student*

*U word uitgenooi om deel te neem aan 'n kort opname wat uitgevoer word deur Dr. Hermann Swart, Departement Sielkunde, Universiteit Stellenbosch. Hierdie opname ondersoek die sosiale ervarings en opinies van studente wat studeer by Universiteit Stellenbosch (Navoringsingsetiesenummer: HS1051/2014), en sal ongeveer dertig minute neem om te voltooi.*

*U deelname aan hierdie opname is heeltemal vertroulik en anoniem. Studente wie die opname voltooi sal vir 'n kontantprystrekking ter waarde van R1,000.00 ingeskryf word. Klik asseblief op die volgende skakel vir verdere inligting oor die opname en om die opname te voltooi.*

Sincerely / *Vriendelike Groete,*

Dr. Hermann Swart

Dept. Psychology / Sielkunde

Universiteit \* Stellenbosch \* University

## APPENDIX B

### INFORMED CONSENT FORM



UNIVERSITEIT • STELLENBOSCH • UNIVERSITY  
jou kennisvennoot • your knowledge partner

---

#### **Informed Consent to Participate in this Study**

#### *Inwilliging om Deel te Neem aan Hierdie Studie*

---

*Afrikaans volg hier onder*

#### **Social Opinions and Experiences of Stellenbosch University Students**

You are asked to participate in a research study conducted by Dr Hermann Swart, Department of Psychology at Stellenbosch University on the **Social Opinions and Experiences of Stellenbosch University Students**. This research has received the necessary ethical clearance from the Research Ethics Committee (Humanities) at Stellenbosch University (REC clearance number: HS1051/2014), as well as the necessary Institutional clearance from Stellenbosch University. You were selected as a possible participant in this study because you are a registered student at Stellenbosch University.

#### **1. PURPOSE OF THE STUDY**

The purpose of this study is to gather information from students about some of their social experiences on campus and on specific social attitudes and opinions of students, and how these experiences and opinions develop over time. This survey forms part of a series of four studies that we are conducting over the course of the next year that aims to study and compare the social opinions and experiences of students across the four largest communities represented on campus (namely white, coloured, black (African), and Indian South African students). This survey forms the second wave of data collection comprising this series. Your participation in this survey will make a valuable contribution to our understanding of the range of social opinions and experiences of students attending Stellenbosch University.

#### **2. PROCEDURES**

Should you agree to participate in this survey, you will be asked to read through and answer a range of questions relating to your social opinions and experiences on campus. In order to submit the survey, all the questions that are posed to the participants require an answer.

Should you feel that there is a question that you do not wish to answer, you are free to withdraw your participation (see below). It should not take you longer than thirty to forty minutes to complete the survey, and you can complete this survey anywhere and at any time so long as you have access to a computer and an internet connection. Please note that the completed surveys for participants that choose to participate in more than one of the four studies that comprise this research will be matched over time using an anonymous, unique identifier provided by each participant, thereby ensuring the anonymity of all participants.

### **3. POTENTIAL RISKS AND DISCOMFORTS**

It is not expected that this research should cause you any risk and discomfort. However, if at any time you feel distressed, you have the right to withdraw at any time. If you should feel any psychological discomfort, you may access free counselling services at the Stellenbosch University Center for Student Counselling and Development located at 37 Victoria Street, Stellenbosch (tel: 021 808 4707).

### **4. POTENTIAL BENEFITS TO SUBJECTS AND/OR TO SOCIETY**

Your participation in this study could lead to improved knowledge on social attitudes amongst Stellenbosch students. This information could contribute to the promotion of more positive attitudes and friendships amongst Stellenbosch University students, as well as contributing to the knowledge base of Social Psychology. The findings from this research will be published in peer-reviewed, accredited scientific journals.

### **5. PAYMENT FOR PARTICIPATION**

Participants that submit a complete survey will be eligible to enter themselves into the Cash Prize Draw for R1,000.00. You will be asked to provide a valid telephone number where you might be contacted in the event that you are the winner of the Cash Prize. Participants that take part in all four surveys over the duration of the study will be entered into an additional Cash Prize Draw for R1,000.00.

### **6. CONFIDENTIALITY AND ANONYMITY**

Your participation in this study is completely confidential. No other student or staff member at the University will have access to your responses. Only the principle researcher, Dr Hermann Swart, will have access to the data that you provide.

No personal or identifying information will be collected from you. Each survey will be assigned a unique identifier that will not be traceable to the personal identity of any one participant. Your participation in this study will therefore be anonymous.

## 7. PARTICIPATION AND WITHDRAWAL AND RIGHTS OF PARTICIPANTS

You may withdraw your consent and participation from this study at any time without penalty. There is a 'quit' button on each page that will allow you to exit the survey at any point in time. The principle investigator may withdraw you from this research if circumstances arise which warrant doing so. You are not waiving any legal claims, rights or remedies because of your participation in this research study. If you have questions regarding your rights as a research subject, contact Ms Maléne Fouché (mfouche@sun.ac.za; 021 808 4622) at the Division for Research Development.

## 8. IDENTIFICATION OF INVESTIGATORS

If you have any questions or concerns about the research, please feel free to contact Dr. Hermann Swart (Principle Investigator): hswart@sun.ac.za / 021 808 9061.

Should you agree with these terms and conditions, please select the '**I Agree**' icon at the bottom of the page. In doing so, you will be giving your consent to participate in this study, and you will then be directed to the survey. Should you not agree with the terms and conditions, please select the '**I do not Agree**' icon at the bottom of the page, and you will be exited from this portal.

Best wishes,  
Dr Hermann Swart

---

### **Sosiale Opinions en Ervarings van Studente aan Stellenbosch Universiteit**

U word gevra om deel te neem aan 'n navorsingstudie wat uitgevoer word deur Dr. Hermann Swart, Departement van Sielkunde by Stellenbosch Universiteit oor die **Sosiale Opinions en Ervarings van Suid-Afrikaanse Studente**. Hierdie navorsing het die nodige etiese klaring ontvang van die Navorsingsetiesekomitee (Humaniora) by Stellenbosch Universiteit (NEK klaringsnommer: HS1051 / 2014), sowel as die nodige Institusionele klaring vanaf Stellenbosch Universiteit. U is gekies as 'n moontlike deelnemer aan hierdie studie, want u is 'n geregistreerde student aan Stellenbosch Universiteit.

### **1. DOEL VAN DIE STUDIE**

Die doel van die studie is om inligting in te samel van studente oor hulle sosiale ervarings op kampus en oor spesifieke sosiale houdings en opinies van studente en hoe hierdie ervarings en opiniess ontwikkel oor tyd. Hierdie opname vorm deel van 'n reeks van vier studies wat ons sal uitvoer oor die verloop van die volgende jaar wat daarop gemik is om die sosiale opinies en ervarings van studente vanuit die vier grootste verteenwoordigende populasiegroepe op kampus (naamlik wit, bruin/kleurling, swart, en Indiese Suid-Afrikaanse



studente) met mekaar te vergelyk. Hierdie vorm die tweede opname van die reeks van studies wat tans uitgevoer word. U deelname aan hierdie studie sal 'n waardevolle bydrae maak tot ons begrip van die omvang van sosiale menings en ervarings van studente aan Stellenbosch Universiteit.

## **2. PROSEDURES**

Indien u instem om deel te neem aan die studie, sal u gevra word om 'n reeks vrae deur te lees en te beantwoord oor u sosiale menings en ervarings op kampus. Om hierdie opname te voltooi word vereis dat al die vrae wat aan die deelnemers gestel word, beantwoord word. Indien u voel dat daar 'n vraag is wat u nie wil antwoord nie, is u vry om u deelname aan hierdie studie te onttrek (sien hieronder). Dit behoort u nie langer as dertig tot veertig minute te neem om die opname te voltooi nie en u kan hierdie opname enige plek en op enige tyd voltooi solank u toegang tot 'n rekenaar en internet-toegang het. Let asseblief daarop dat die voltooide opnames van die deelnemers wat kies om deel te neem aan meer as een van die vier studies in hierdie navorsingsprojek met mekaar verbind sal word oor tyd met behulp van 'n anonieme, unieke identifiseerder wat deur elke deelnemer voorsien word, en sodoende word die anonimiteit van alle deelnemers verseker.

## **3. POTENSIËLE RISIKO'S EN ONGEMAK**

Hierdie studie hou geen voorsienbare risiko's of ongemak in nie, maar indien u op enige tyd ontsteld voel het u die reg om van hierdie studie te onttrek op enige tyd. Indien u enige sielkundige ongemak ervaar kan u gratis toegang kry tot beradingsdienste by die Stellenbosch Universiteit Sentrum vir Studentevoorigting en Ontwikkeling geleë in Victoriastraat 37, Stellenbosch (Tel: 021 808 4707).

## **4. POTENSIËLE VOORDELE VIR DEELNEMERS EN/OF DIE SAMELEWING**

U deelname aan hierdie studie kan lei tot verbeterde kennis oor sosiale houdings onder Stellenbosch-studente. Hierdie inligting kan bydra tot die bevordering van meer positiewe houdings en vriendskappe onder Stellenbosch Universiteit se studente, sowel as om by te dra tot die kennis van Sosiale Sielkunde. Die bevindinge van hierdie navorsing sal gepubliseer word in eweknie-beoordeelde, geakkrediteerde wetenskaplike tydskrifte.

## **5. BETALING VIR DEELNAME**

Deelnemers wat 'n volledige opname indien sal in aanmerking kom om hulself in te skryf vir die kontantprys trekking van R1,000.00. U sal gevra word om 'n geldige telefoonnommer te voorsien waar u dalk gekontak mag word in die geval waar u die wenner van die kontantprys is. Deelnemers wat deelneem aan al vier opnames oor die duur van die studie sal in aanmerking kom vir 'n bykomende kontantprys trekking van R1,000.00.

## 6. VERTROUOLIKHEID EN ANONIMITEIT

U deelname aan hierdie studie is heeltemal vertroulik. Geen ander student of personeellid aan die Universiteit sal toegang tot hê tot u antwoorde nie. Slegs die hoofnavorsers, Dr. Hermann Swart, sal toegang tot die data hê wat u verskaf het.

Geen persoonlike of identifiserende inligting sal van u ingesamel word nie. Aan elke opname sal daar 'n unieke identifiseerder toegeken word wat nie teruggelei kan word na die persoonlike identiteit van enige een van die deelnemers nie. U deelname aan hierdie studie sal dus anoniem wees.

## 7. DEELNAME EN ONTTREKKING EN REGTE VAN DEELNEMERS

U kan u toestemming en deelname onttrek van hierdie studie op enige tyd sonder enige negatiewe gevolge. Daar is 'n 'verlaat'-knoppie op elke bladsy wat u sal toelaat om die opname te verlaat op enige tyd. Die hoofnavorsers mag u onttrek van hierdie studie indien omstandighede dit regverdig. Deur u deelname aan hierdie navorsingstudie, doen u geensins afstand van enige wettige eise, regte of regsmiddele tot u beskikking nie. Indien u enige vrae het oor u regte as 'n navorsingsdeelnemer kan u vir Me. Maléne Fouché (mfouche@sun.ac.za; 021 808 4622) by die Afdeling vir Navorsingsontwikkeling kontak.

## 8. IDENTIFIKASIE VAN DIE NAVORSERS

Indien u enige vrae of kommentaar oor die navorsing het, voel asseblief vry om vir Dr. Hermann Swart (Hoofnavorsers) te kontak: hswart@sun.ac.za / 021 808 9061.

Indien u instem tot hierdie terme en voorwaardes, kies asseblief die "**Ek stem in**"-ikoon onder aan die bladsy. So sal u u toestemming gee om deel te neem aan hierdie studie en sal u na die opname herlei word. Indien u nie instem tot hierdie terme en voorwaardes nie, kies asseblief die "**Ek stem nie in nie**"-ikoon onder aan die bladsy en u sal hierdie portaal verlaat.

Vriendelike groete  
Dr. Hermann Swart

---

**I have read the terms and conditions above and**  
***Ek het die bepalings en voorwaardes hier bo gelees en***

- ☐ **AGREE to participate in this survey / STEM IN vir deelname aan die opname**
  - ☐ **DO NOT AGREE to participate in this survey / STEM NIE IN vir deelname aan hierdie opname nie**
-

## APPENDIX C

## BIOGRAPHIC AND DEMOGRAPHIC QUESTIONNAIRE

Please answer each of the following questions relating to your Biographic and Demographic information below as accurately as possible. /  
*Beantwoord asseblief elkeen van die volgende vrae oor u Biografiese en Demografiese inligting so akkuraat as moontlik.*

1. Please indicate your Gender / *Dui asseblief u geslag aan:*

Female / *Vroulik*  
0

Male / *Manlik*  
1

2. Please indicate your age today / *Dui asseblief u ouderdom vandag aan*\_\_\_\_\_

3. Please indicate which of the following categories below describes you best: / *Dui asseblief aan watter een van die volgende kategorieë u die beste beskryf:*

white  
South African  
*wit*  
*Suid-Afrikaner*  
1

black (African)  
South African  
*swart*  
*Suid-Afrikaner*  
2

coloured  
South African  
*bruin/kleurling*  
*Suid-Afrikaner*  
3

Indian  
South African  
*Indiese*  
*Suid-Afrikaner*  
4

Asian  
South African  
*Asieër*  
*Suid-Afrikaner*  
5

4. Please indicate your home (first) language / *Dui asseblief u huis- (eerste-) taal aan:*

English  
1

Afrikaans  
2

IsiXhosa  
3

IsiZulu  
4

Other / *Ander*  
5

5. How many years have you been a registered student at Stellenbosch University (including this year)? / *Hoeveel jare (insluitend hierdie jaar) studeer u al aan die Universiteit Stellenbosch?*\_\_\_\_\_

1 <sup>st</sup> /1 <sup>ste</sup>	2 <sup>nd</sup> /2 <sup>de</sup>	3 <sup>rd</sup> /3 <sup>de</sup>	4 <sup>th</sup> /4 <sup>de</sup>	5 <sup>th</sup> /5 <sup>de</sup>	6 <sup>th</sup> /6 <sup>de</sup>	7 <sup>th</sup> /7 <sup>de</sup>	8 <sup>th</sup> /8 <sup>ste</sup> +
year/jaar	year/jaar	year/jaar	year/jaar	year/jaar	year/jaar	year/jaar	year/jaar
1	2	3	4	5	6	7	8

6. Please indicate your type of accommodation / *Dui asseblief u tipe akkommodasie aan:*

University Residence  
*Universiteitskoshuis*  
1

Parents/legal guardian  
*Ouers/Wettige voog*  
2

Private Accommodation  
*Privaat Huisvesting*  
3

\*Disclaimer: The Department of Psychology does not acknowledge or endorse the legitimacy of these artificial categories, and accepts that individuals might categorise themselves in a number of different ways over-and-above or other than just ethnicity. This survey, however, aims to compare the points of view and experiences of individuals across these ethnic groups on campus, and it is therefore important that an individual's responses can be located within a given ethnic group. This does not mean that the individual identifies with or endorses the category rather that it provides a context for understanding his/her point of view or experience. / *\*Ontkenning: Die Departement Sielkunde erken of onderskryf nie die geldigheid van hierdie kunsmatige kategorieë nie, en aanvaar dat individue hulle op verskeie maniere, of nie nét volgens etnisiteit nie, klassifiseer. Hierdie opname poog egter om die sienings en ervarings van individue uit al die etniese groepe op kampus te vergelyk, en daarom is dit belangrik dat 'n individu se antwoorde binne die verband van 'n bepaalde etniese groep geplaas kan word. Dit beteken geensins dat die individu hom/haar met die kategorie vereenselwig óf dit onderskryf nie, maar bied bloot 'n konteks waarin sy/haar siening of ervaring begryp kan word.*

## APPENDIX D

### MAIN SURVEY

#### 1. General intergroup contact with black (African) South Africans (adapted from Swart, 2008; Swart et al., 2010, 2011)

The following questions ask about your daily interactions with black (African) South Africans. Please read each question carefully and answer them as honestly as possible. There are no right or wrong answers, we are simply interested to hear about your experiences. Do not think too long on the answers, rather give the first answer that comes to mind. / *Die volgende vrae handel oor u daaglikse interaksies met swart Suid-Afrikaners. Lees asseblief elke vraag versigtig deur en beantwoord hulle so eerlik as moontlik. Daar is nie 'n regte of verkeerde antwoord nie, ons stel slegs in u eie ervarings belang. Moenie te lank aan u antwoorde dink nie, gee liewers die eerste antwoord wat by u op kom.*

1.1 In general, how regularly do you have direct, face-to-face interactions (e.g., conversations) in SOCIAL SETTINGS with black (African) South Africans? *Oor die algemeen, hoe gereeld het u direkte, aangesig-tot-aangesig sosiale interaksie (bv. gesprekke) in SOSIALE OMGEWINGS met swart Suid-Afrikaners?*

Never	Rarely	Every now and then	Very often	All the time
<i>Nooit</i>	<i>Selde</i>	<i>Elke nou-en-dan</i>	<i>Baie gereeld</i>	<i>Deurgaans</i>
0	1	2	3	4

1.2 In general, how regularly do you have direct, face-to-face interactions (e.g., conversations) with black (African) South Africans as part of the same SPORTS TEAM/SOCIAL CLUB/CAMPUS SOCIETY? / *Oor die algemeen, hoe gereeld het u direkte, aangesig-tot-aangesig interaksie (bv. gesprekke) met swart Suid-Afrikaners as deel van dieselfde SPORTSPAN / SOSIALE KLUB / KAMPUSVERENIGING?*

Never	Rarely	Every now and then	Very often	All the time
<i>Nooit</i>	<i>Selde</i>	<i>Elke nou-en-dan</i>	<i>Baie gereeld</i>	<i>Deurgaans</i>
0	1	2	3	4

1.3 In general, how regularly do you have direct, face-to-face interactions (e.g., conversations) with black (African) South Africans during LECTURES, PRACTICALS, and/or TUTORIALS? *Oor die algemeen, hoe gereeld het u direkte, aangesig-tot-aangesig interaksie (bv. gesprekke) met swart Suid-Afrikaners tydens LESINGS PRAKTIESE KLASSE, en/of TUTORIALE?*

Never	Rarely	Every now and then	Very often	All the time
<i>Nooit</i>	<i>Selde</i>	<i>Elke nou-en-dan</i>	<i>Baie gereeld</i>	<i>Deurgaans</i>
0	1	2	3	4

**2. General intergroup contact with coloured South Africans (adapted from Swart, 2008; Swart et al., 2010, 2011)**

The following questions ask about your daily interactions with coloured South Africans. Please read each question carefully and answer them as honestly as possible. There are no right or wrong answers, we are simply interested to hear about your experiences. Do not think too long on the answers, rather give the first answer that comes to mind. / *Die volgende vrae handel oor u daaglikse interaksies met bruin/kleurling Suid-Afrikaners. Lees asseblief elke vraag versigtig deur en beantwoord hulle so eerlik as moontlik. Daar is nie 'n regte of verkeerde antwoord nie, ons stel slegs in u eie ervarings belang. Moenie te lank aan u antwoorde dink nie, gee liewers die eerste antwoord wat by u op kom.*

2.1 In general, how regularly do you have direct, face-to-face interactions (e.g., conversations) in SOCIAL SETTINGS with coloured South Africans? *Oor die algemeen, hoe gereeld het u direkte, aangesig-tot-aangesig sosiale interaksie (bv. gesprekke) in SOSIALE OMGEWINGS met bruin/kleurling Suid-Afrikaners?*

Never	Rarely	Every now and then	Very often	All the time
<i>Nooit</i>	<i>Selde</i>	<i>Elke nou-en-dan</i>	<i>Baie gereeld</i>	<i>Deurgaans</i>
0	1	2	3	4

2.2 In general, how regularly do you have direct, face-to-face interactions (e.g., conversations) with coloured South Africans as part of the same SPORTS TEAM/SOCIAL CLUB/CAMPUS SOCIETY? / *Oor die algemeen, hoe gereeld het u direkte, aangesig-tot-aangesig interaksie (bv. gesprekke) met bruin/kleurling Suid-Afrikaners as deel van dieselfde SPORTSPAN / SOSIALE KLUB / KAMPUSVERENIGING?*

Never	Rarely	Every now and then	Very often	All the time
<i>Nooit</i>	<i>Selde</i>	<i>Elke nou-en-dan</i>	<i>Baie gereeld</i>	<i>Deurgaans</i>
0	1	2	3	4

2.3 In general, how regularly do you have direct, face-to-face interactions (e.g., conversations) with coloured South Africans during LECTURES, PRACTICALS, and/or TUTORIALS? *Oor die algemeen, hoe gereeld het u direkte, aangesig-tot-aangesig interaksie (bv. gesprekke) met bruin/kleurling Suid-Afrikaners tydens LESINGS PRAKTIESE KLASSE, en/of TUTORIALE?*

Never	Rarely	Every now and then	Very often	All the time
<i>Nooit</i>	<i>Selde</i>	<i>Elke nou-en-dan</i>	<i>Baie gereeld</i>	<i>Deurgaans</i>
0	1	2	3	4

### 3. Cross-group Friendships with black (African) South Africans (adapted from Swart, 2008, Swart et al., 2010, 2011)

The following questions ask about your friendships with black (African) South Africans. Please read each question carefully and answer them as honestly as possible. There are no right or wrong answers, we are simply interested to hear about your experiences. Do not think too long on the answers, rather give the first answer that comes to mind. / *Die volgende vrae handel oor u vriendskappe met swart Suid-Afrikaners. Lees asseblief elke vraag versigtig deur en beantwoord hulle so eerlik as moontlik. Daar is nie 'n regte of verkeerde antwoord nie, ons stel slegs in u eie ervarings belang. Moenie te lank aan u antwoorde dink nie, gee liewers die eerste antwoord wat by u op kom.*



3.1 How many black (African) South African friends do you have in general? / *Oor die algemeen, hoeveel swart Suid-Afrikaanse vriende/vriendinne het u?*

None / <i>Geen</i>	1	2-5	5-10	More than 10 / <i>Meer as 10</i>
0	1	2	3	4

3.2 How often do you spend time with your black (African) South African friends in general? / *Oor die algemeen, hoe gereeld bring u tyd saam met u swart Suid-Afrikaanse vriend(e)/vriendin(ne) deur?*

Never	Rarely	Every now and then	Very often	All the time
<i>Nooit</i>	<i>Selde</i>	<i>Elke nou-en-dan</i>	<i>Baie gereeld</i>	<i>Deurgaans</i>
0	1	2	3	4

#### 4. Cross-group Friendships with coloured South Africans (adapted from Swart, 2008, Swart et al., 2010, 2011)

The following questions ask about your friendships with coloured South Africans. Please read each question carefully and answer them as honestly as possible. There are no right or wrong answers, we are simply interested to hear about your experiences. Do not think too long on the answers, rather give the first answer that comes to mind. / *Die volgende vrae handel oor u vriendskappe met bruin/kleurling Suid-Afrikaners. Lees asseblief elke vraag versigtig deur en beantwoord hulle so eerlik as moontlik. Daar is nie 'n regte of verkeerde antwoord nie, ons stel slegs in u eie ervarings belang. Moenie te lank aan u antwoorde dink nie, gee liewers die eerste antwoord wat by u op kom.*

4.1 How many coloured South African friends do you have in general? / *Oor die algemeen, hoeveel bruin/kleurling Suid-Afrikaanse vriende/vriendinne het u?*

None / <i>Geen</i>	1	2-5	5-10	More than 10 / <i>Meer as 10</i>
0	1	2	3	4

4.2 How often do you spend time with your coloured South African friends in general? / *Oor die algemeen, hoe gereeld bring u tyd saam met u bruin/kleurling Suid-Afrikaanse vriend(e)/vriendin(ne) deur?*

Never	Rarely	Every now and then	Very often	All the time
<i>Nooit</i>	<i>Selde</i>	<i>Elke nou-en-dan</i>	<i>Baie gereeld</i>	<i>Deurgaans</i>
0	1	2	3	4

**5 Perspective-taking towards black (African) South Africans (Adapted from Batson et al., 1997; Davis, 1994)**

The following statements relate to black (African) South Africans in general. Please indicate the extent to which you agree or disagree with each statement. Please answer each statement as honestly as possible. There are no right or wrong answers, we are simply interested to hear about your opinion. Do not think too long on the answers, rather give the first answer that comes to mind. / *Die volgende stellings hou verband met swart Suid-Afrikaners oor die algemeen. Dui asseblief aan tot hoe 'n mate u met elke stelling saamstem al dan nie. Beantwoord asseblief elke stelling so eerlik as moontlik. Daar is nie 'n regte of verkeerde antwoord nie, ons stel slegs in u eie opinie belang. Moenie te lank aan u antwoorde dink nie, gee liewers die eerste antwoord wat by u op kom.*

5.1 I believe I understand what it is like to be a black (African) South African in this society / *Ek glo ek verstaan hoe dit is om 'n swart Suid-Afrikaner te wees in hierdie samelewing.*

Completely	Slightly		Slightly	Completely
Disagree	Disagree	Unsure	Agree	Agree
<i>Stem glad nie saam nie</i>	<i>Stem nie heeltemal saam nie</i>	<i>Onseker</i>	<i>Stem 'n bietjie saam</i>	<i>Stem heeltemal saam</i>
1	2	3	4	5

5.2 I can easily put myself in the place of black (African) South Africans when I want to understand their viewpoint / *Ek kan maklik myself in die plek van swart Suid-Afrikaners plaas wanneer ek hulle standpunt wil verstaan.*

Completely	Slightly		Slightly	Completely
Disagree	Disagree	Unsure	Agree	Agree
<i>Stem glad nie</i>	<i>Stem nie heel-</i>	<i>Onseker</i>	<i>Stem 'n</i>	<i>Stem heel-</i>
<i>saam nie</i>	<i>temal saam nie</i>		<i>bietjie saam</i>	<i>temal saam</i>
1	2	3	4	5

5.3 I don't understand the way black (African) South Africans view the world / *Ek verstaan nie die manier wat swart Suid-Afrikaners na die wêreld kyk nie.*

Completely	Slightly		Slightly	Completely
Disagree	Disagree	Unsure	Agree	Agree
<i>Stem glad nie</i>	<i>Stem nie heel-</i>	<i>Onseker</i>	<i>Stem 'n</i>	<i>Stem heel-</i>
<i>saam nie</i>	<i>temal saam nie</i>		<i>bietjie saam</i>	<i>temal saam</i>
1	2	3	4	5

**6 Perspective-taking towards coloured South Africans (Adapted from Batson et al., 1997; Davis, 1994)**

The following statements relate to coloured South Africans in general. Please indicate the extent to which you agree or disagree with each statement. Please answer each statement as honestly as possible. There are no right or wrong answers, we are simply interested to hear about your opinion. Do not think too long on the answers, rather give the first answer that comes to mind. / *Die volgende stellings hou verband met bruin/kleurling Suid-Afrikaners oor die algemeen. Dui asseblief aan tot hoe 'n mate u met elke stelling saamstem al dan nie. Beantwoord asseblief elke stelling so eerlik as moontlik. Daar is nie 'n regte of verkeerde antwoord nie, ons stel slegs in u eie opinie belang. Moenie te lank aan u antwoorde dink nie, gee liewers die eerste antwoord wat by u op kom.*

6.1 I believe I understand what it is like to be a coloured South African in this society / *Ek glo ek verstaan hoe dit is om 'n bruin/kleurling Suid-Afrikaner te wees in hierdie samelewing.*

Completely	Slightly		Slightly	Completely
Disagree	Disagree	Unsure	Agree	Agree
<i>Stem glad nie</i>	<i>Stem nie heel-</i>	<i>Onseker</i>	<i>Stem 'n</i>	<i>Stem heel-</i>
<i>saam nie</i>	<i>temal saam nie</i>		<i>bietjie saam</i>	<i>temal saam</i>
1	2	3	4	5

6.2 I can easily put myself in the place of coloured South Africans when I want to understand their viewpoint / *Ek kan maklik myself in die plek van bruin/kleurling Suid-Afrikaners plaas wanneer ek hulle standpunt wil verstaan.*

Completely	Slightly		Slightly	Completely
Disagree	Disagree	Unsure	Agree	Agree
<i>Stem glad nie</i>	<i>Stem nie heel-</i>	<i>Onseker</i>	<i>Stem 'n</i>	<i>Stem heel-</i>
<i>saam nie</i>	<i>temal saam nie</i>		<i>bietjie saam</i>	<i>temal saam</i>
1	2	3	4	5

6.3 I don't understand the way coloured South Africans view the world / *Ek verstaan nie die manier wat bruin/kleurling Suid-Afrikaners na die wêreld kyk nie.*

Completely	Slightly		Slightly	Completely
Disagree	Disagree	Unsure	Agree	Agree
<i>Stem glad nie</i>	<i>Stem nie heel-</i>	<i>Onseker</i>	<i>Stem 'n</i>	<i>Stem heel-</i>
<i>saam nie</i>	<i>temal saam nie</i>		<i>bietjie saam</i>	<i>temal saam</i>
1	2	3	4	5

## 7 Affective empathy towards black (African) South Africans (adapted from Swart et al., 2011; Turner et al., 2007)

The following statements relate to black (African) South Africans in general. Please indicate the extent to which you agree or disagree with each statement. Please answer each statement as honestly as possible. There are no right or wrong answers, we are simply interested to hear about your opinion. Do not think too long on the answers, rather give the first answer that comes to mind. / *Die volgende stellings hou verband met swart Suid-Afrikaners oor die algemeen. Dui asseblief aan tot hoe 'n mate u met elke stelling saamstem al dan nie. Beantwoord asseblief elke stelling so eerlik as moontlik. Daar is nie 'n regte of verkeerde antwoord nie, ons stel slegs in u eie opinie belang. Moenie te lank aan u antwoorde dink nie, gee liewers die eerste antwoord wat by u op kom.*

7.1 If I saw a black (African) South African was feeling sad, I think that it would also make me feel sad / *As ek gesien het dat 'n swart Suid-Afrikaner ontsteld was, sal dit my ongelukkig laat voel.*

Completely	Slightly		Slightly	Completely
Disagree	Disagree	Unsure	Agree	Agree
<i>Stem glad nie saam nie</i>	<i>Stem nie heeltemal saam nie</i>	<i>Onseker</i>	<i>Stem 'n bietjie saam</i>	<i>Stem heeltemal saam</i>
1	2	3	4	5

7.2 If I saw a black (African) South African was feeling happy, I think that it would also make me feel happy / *As ek 'n swart Suid-Afrikaner gelukkig gesien het, dink ek dit sou my ook gelukkig maak.*

Completely	Slightly		Slightly	Completely
Disagree	Disagree	Unsure	Agree	Agree
<i>Stem glad nie saam nie</i>	<i>Stem nie heeltemal saam nie</i>	<i>Onseker</i>	<i>Stem 'n bietjie saam</i>	<i>Stem heeltemal saam</i>
1	2	3	4	5

7.3 When I hear about the misfortunes of a black (African) South African, it usually makes me feel sorry for him/her / *Wanneer ek oor die teëspoed van 'n swart Suid-Afrikaner hoor, kry ek hom/haar gewoonlik jammer.*

Completely	Slightly		Slightly	Completely
Disagree	Disagree	Unsure	Agree	Agree
<i>Stem glad nie</i>	<i>Stem nie heel-</i>	<i>Onseker</i>	<i>Stem 'n</i>	<i>Stem heel-</i>
<i>saam nie</i>	<i>temal saam nie</i>		<i>bietjie saam</i>	<i>temal saam</i>
1	2	3	4	5

## 8 Affective empathy towards coloured South Africans (adapted from Swart et al., 2011; Turner et al., 2007)

The following statements relate to coloured South Africans in general. Please indicate the extent to which you agree or disagree with each statement. Please answer each statement as honestly as possible. There are no right or wrong answers, we are simply interested to hear about your opinion. Do not think too long on the answers, rather give the first answer that comes to mind. / *Die volgende stellings hou verband met bruin/kleurling Suid-Afrikaners oor die algemeen. Dui asseblief aan tot hoe 'n mate u met elke stelling saamstem al dan nie. Beantwoord asseblief elke stelling so eerlik as moontlik. Daar is nie 'n regte of verkeerde antwoord nie, ons stel slegs in u eie opinie belang. Moenie te lank aan u antwoorde dink nie, gee lievers die eerste antwoord wat by u op kom.*

8.1 If I saw a coloured South African was feeling sad, I think that it would also make me feel sad / *As ek gesien het dat 'n bruin//kleurling Suid-Afrikaner ontsteld was, sal dit my ongelukkig laat voel.*

Completely	Slightly		Slightly	Completely
Disagree	Disagree	Unsure	Agree	Agree
<i>Stem glad nie</i>	<i>Stem nie heel-</i>	<i>Onseker</i>	<i>Stem 'n</i>	<i>Stem heel-</i>
<i>saam nie</i>	<i>temal saam nie</i>		<i>bietjie saam</i>	<i>temal saam</i>
1	2	3	4	5

8.2 If I saw a coloured South African was feeling happy, I think that it would also make me feel happy / *As ek 'n bruin/kleurling Suid-Afrikaner gelukkig gesien het, dink ek dit sou my ook gelukkig maak.*

Completely	Slightly		Slightly	Completely
Disagree	Disagree	Unsure	Agree	Agree
<i>Stem glad nie</i>	<i>Stem nie heel-</i>	<i>Onseker</i>	<i>Stem 'n</i>	<i>Stem heel-</i>
<i>saam nie</i>	<i>temal saam nie</i>		<i>bietjie saam</i>	<i>temal saam</i>
1	2	3	4	5

8.3 When I hear about the misfortunes of a coloured South African, it usually makes me feel sorry for him/her / *Wanneer ek oor die teëspoed van 'n bruin/kleurling Suid-Afrikaner hoor, kry ek hom/haar gewoonlik jammer.*

Completely	Slightly		Slightly	Completely
Disagree	Disagree	Unsure	Agree	Agree
<i>Stem glad nie</i>	<i>Stem nie heel-</i>	<i>Onseker</i>	<i>Stem 'n</i>	<i>Stem heel-</i>
<i>saam nie</i>	<i>temal saam nie</i>		<i>bietjie saam</i>	<i>temal saam</i>
1	2	3	4	5

## 9 Positive outgroup attitudes towards black (African) South Africans (adapted from Swart et al., 2011; Wright et al., 1997)

The following statements relate to black (African) South Africans in general. Please indicate the extent to which you agree or disagree with each statement. Please answer each statement as honestly as possible. There are no right or wrong answers, we are simply interested to hear about your opinion. Do not think too long on the answers, rather give the first answer that comes to mind. / *Die volgende stellings hou verband met swart Suid-Afrikaners oor die algemeen. Dui asseblief aan tot hoe 'n mate u met elke stelling saamstem al dan nie. Beantwoord asseblief elke stelling so eerlik as moontlik. Daar is nie 'n regte of verkeerde antwoord nie, ons stel slegs in u eie opinie belang. Moenie te lank aan u antwoorde dink nie, gee liewers die eerste antwoord wat by u op kom.*



9.1 When I think about black (African) South Africans in general, I have POSITIVE feelings towards them / *Wanneer ek aan swart Suid-Afrikaners oor die algemeen dink, het ek POSITIEWE gevoelens teenoor hulle.*

Completely	Slightly		Slightly	Completely
Disagree	Disagree	Unsure	Agree	Agree
<i>Stem glad nie saam nie</i>	<i>Stem nie heeltemal saam nie</i>	<i>Onseker</i>	<i>Stem 'n bietjie saam</i>	<i>Stem heeltemal saam</i>
1	2	3	4	5

9.2 When I think about black (African) South Africans in general, I ADMIRE them / *Wanneer ek aan swart Suid-Afrikaners oor die algemeen dink, BEWONDER ek hulle.*

Completely	Slightly		Slightly	Completely
Disagree	Disagree	Unsure	Agree	Agree
<i>Stem glad nie saam nie</i>	<i>Stem nie heeltemal saam nie</i>	<i>Onseker</i>	<i>Stem 'n bietjie saam</i>	<i>Stem heeltemal saam</i>
1	2	3	4	5

9.3 When I think about black (African) South Africans in general, I am filled with RESPECT for them / *Wanneer ek aan swart Suid-Afrikaners oor die algemeen dink, is ek vol RESPEK vir hulle.*

Completely	Slightly		Slightly	Completely
Disagree	Disagree	Unsure	Agree	Agree
<i>Stem glad nie saam nie</i>	<i>Stem nie heeltemal saam nie</i>	<i>Onseker</i>	<i>Stem 'n bietjie saam</i>	<i>Stem heeltemal saam</i>
1	2	3	4	5

9.4 When I think about black (African) South Africans in general, I have NEGATIVE feelings towards them / *Wanneer ek aan swart Suid-Afrikaners oor die algemeen, het ek NEGATIEWE gevoelens teenoor hulle.*

Completely	Slightly		Slightly	Completely
Disagree	Disagree	Unsure	Agree	Agree
<i>Stem glad nie</i>	<i>Stem nie heel-</i>	<i>Onseker</i>	<i>Stem 'n</i>	<i>Stem heel-</i>
<i>saam nie</i>	<i>temal saam nie</i>		<i>bietjie saam</i>	<i>temal saam</i>
1	2	3	4	5

**10. Positive outgroup attitudes towards coloured South Africans (adapted from Swart et al., 2011; Wright et al., 1997)**

The following statements relate to coloured South Africans in general. Please indicate the extent to which you agree or disagree with each statement. Please answer each statement as honestly as possible. There are no right or wrong answers, we are simply interested to hear about your opinion. Do not think too long on the answers, rather give the first answer that comes to mind. / *Die volgende stellings hou verband met bruin/kleurling Suid-Afrikaners oor die algemeen. Dui asseblief aan tot hoe 'n mate u met elke stelling saamstem al dan nie. Beantwoord asseblief elke stelling so eerlik as moontlik. Daar is nie 'n regte of verkeerde antwoorde nie, ons stel slegs in u eie opinie belang. Moenie te lank aan u antwoorde dink nie, gee liewers die eerste antwoord wat by u op kom.*

10.1 When I think about coloured South Africans in general, I have POSITIVE feelings towards them / *Wanneer ek aan bruin/kleurling Suid-Afrikaners oor die algemeen dink, het ek POSITIEWE gevoelens teenoor hulle.*

Completely	Slightly		Slightly	Completely
Disagree	Disagree	Unsure	Agree	Agree
<i>Stem glad nie</i>	<i>Stem nie heel-</i>	<i>Onseker</i>	<i>Stem 'n</i>	<i>Stem heel-</i>
<i>saam nie</i>	<i>temal saam nie</i>		<i>bietjie saam</i>	<i>temal saam</i>
1	2	3	4	5

10.2 When I think about coloured South Africans in general, I ADMIRE them / *Wanneer ek aan bruin/kleurling Suid-Afrikaners oor die algemeen dink, BEWONDER ek hulle.*

Completely	Slightly		Slightly	Completely
Disagree	Disagree	Unsure	Agree	Agree
<i>Stem glad nie saam nie</i>	<i>Stem nie heeltemal saam nie</i>	<i>Onseker</i>	<i>Stem 'n bietjie saam</i>	<i>Stem heeltemal saam</i>
1	2	3	4	5

10.3 When I think about coloured South Africans in general, I am filled with RESPECT for them / *Wanneer ek aan bruin/kleurling Suid-Afrikaners oor die algemeen dink, is ek vol RESPEK vir hulle.*

Completely	Slightly		Slightly	Completely
Disagree	Disagree	Unsure	Agree	Agree
<i>Stem glad nie saam nie</i>	<i>Stem nie heeltemal saam nie</i>	<i>Onseker</i>	<i>Stem 'n bietjie saam</i>	<i>Stem heeltemal saam</i>
1	2	3	4	5

10.4 When I think about coloured South Africans in general, I have NEGATIVE feelings towards them / *Wanneer ek aan bruin/kleurling Suid-Afrikaners dink oor die algemeen, het ek NEGATIEWE gevoelens teenoor hulle.*

Completely	Slightly		Slightly	Completely
Disagree	Disagree	Unsure	Agree	Agree
<i>Stem glad nie saam nie</i>	<i>Stem nie heeltemal saam nie</i>	<i>Onseker</i>	<i>Stem 'n bietjie saam</i>	<i>Stem heeltemal saam</i>
1	2	3	4	5

### 11. Social Distance towards black (African) South Africans (adapted from Bogardus, 1933)

The following statements relate to black (African) South Africans in general. Please indicate the extent to which you agree or disagree with each statement. Please answer each statement as honestly as possible. There are no right or wrong answers, we are simply interested to hear about your opinion. Do not think too long on the answers, rather give the first answer that comes to mind. / *Die volgende stellings hou verband met swart Suid-Afrikaners oor die algemeen. Dui asseblief aan tot hoe 'n mate u met elke stelling saamstem al dan nie. Beantwoord asseblief elke stelling so eerlik as moontlik. Daar is nie 'n regte of verkeerde antwoord nie, ons stel slegs in u eie opinie belang. Moenie te lank aan u antwoorde dink nie, gee lievers die eerste antwoord wat by u op kom.*

11.1 Please rate to what extent would you be happy to have a black (African) South African attending the same classes as you? / *Tot watter mate u gelukkig sal wees om swart Suid-Afrikaners te hê wat DIESELFDE KLASSE as u loop?*

Not at all	A little	Unsure	Quite a lot	Completely
<i>Glad nie</i>	<i>'n Bietjie</i>	<i>Onseker</i>	<i>Redelik baie</i>	<i>Heeltemal</i>
1	2	3	4	5

11.2 Please rate to what extent would you be happy to have a black (African) South African as your roommate at Res/As your flatmate/housemate? / *Tot watter mate u gelukkig sal wees om 'n swart Suid-Afrikaner te hê as u KAMER-/WOONSTEL-/HUISMAAT?*

Not at all	A little	Unsure	Quite a lot	Completely
<i>Glad nie</i>	<i>'n Bietjie</i>	<i>Onseker</i>	<i>Redelik baie</i>	<i>Heeltemal</i>
1	2	3	4	5

11.3 Please rate to what extent would you be happy to have a black (African) South African as an intimate partner (e.g., boy-/girlfriend?) / *Tot watter mate u gelukkig sal wees om 'n swart Suid-Afrikaner te hê as 'n INTIEME METGESEL? (bv. kêrel/meisie?)*

Not at all	A little	Unsure	Quite a lot	Completely
<i>Glad nie</i>	<i>'n Bietjie</i>	<i>Onseker</i>	<i>Redelik baie</i>	<i>Heeltemal</i>
1	2	3	4	5

## 12. Social Distance towards coloured South Africans (adapted from Bogardus, 1933)

The following statements relate to coloured South Africans in general. Please indicate the extent to which you agree or disagree with each statement. Please answer each statement as honestly as possible. There are no right or wrong answers, we are simply interested to hear about your opinion. Do not think too long on the answers, rather give the first answer that comes to mind. / *Die volgende stellings hou verband met bruin/kleurling Suid-Afrikaners oor die algemeen. Dui asseblief aan tot hoe 'n mate u met elke stelling saamstem al dan nie. Beantwoord asseblief elke stelling so eerlik as moontlik. Daar is nie 'n regte of verkeerde antwoord nie, ons stel slegs in u eie opinie belang. Moenie te lank aan u antwoorde dink nie, gee liewers die eerste antwoord wat by u op kom.*

12.1 Please rate to what extent would you be happy to have a coloured South African attending the same classes as you? / *Tot watter mate u gelukkig sal wees om bruin/kleurling Suid-Afrikaners te hê wat DIESELFDE KLASSE as u loop?*

Not at all	A little	Unsure	Quite a lot	Completely
<i>Glad nie</i>	<i>'n Bietjie</i>	<i>Onseker</i>	<i>Redelik baie</i>	<i>Heeltemal</i>
1	2	3	4	5

12.2 Please rate to what extent would you be happy to have a coloured South African as your roommate at Res/As your flatmate/housemate? / *Tot watter mate u gelukkig sal wees om 'n bruin/kleurling Suid-Afrikaner te hê as u KAMER-/WOONSTEL-/HUISMAAT?*

Not at all	A little	Unsure	Quite a lot	Completely
<i>Glad nie</i>	<i>'n Bietjie</i>	<i>Onseker</i>	<i>Redelik baie</i>	<i>Heeltemal</i>
1	2	3	4	5

12.3 Please rate to what extent would you be happy to have a coloured South African as an intimate partner (e.g., boy-/girlfriend?) / *Tot watter mate u gelukkig sal wees om 'n bruin/kleurling Suid-Afrikaner te hê as 'n INTIEME METGESEL? (bv. kêrel/meisie?)*

Not at all	A little	Unsure	Quite a lot	Completely
<i>Glad nie</i>	<i>'n Bietjie</i>	<i>Onseker</i>	<i>Redelik baie</i>	<i>Heeltemal</i>
1	2	3	4	5